

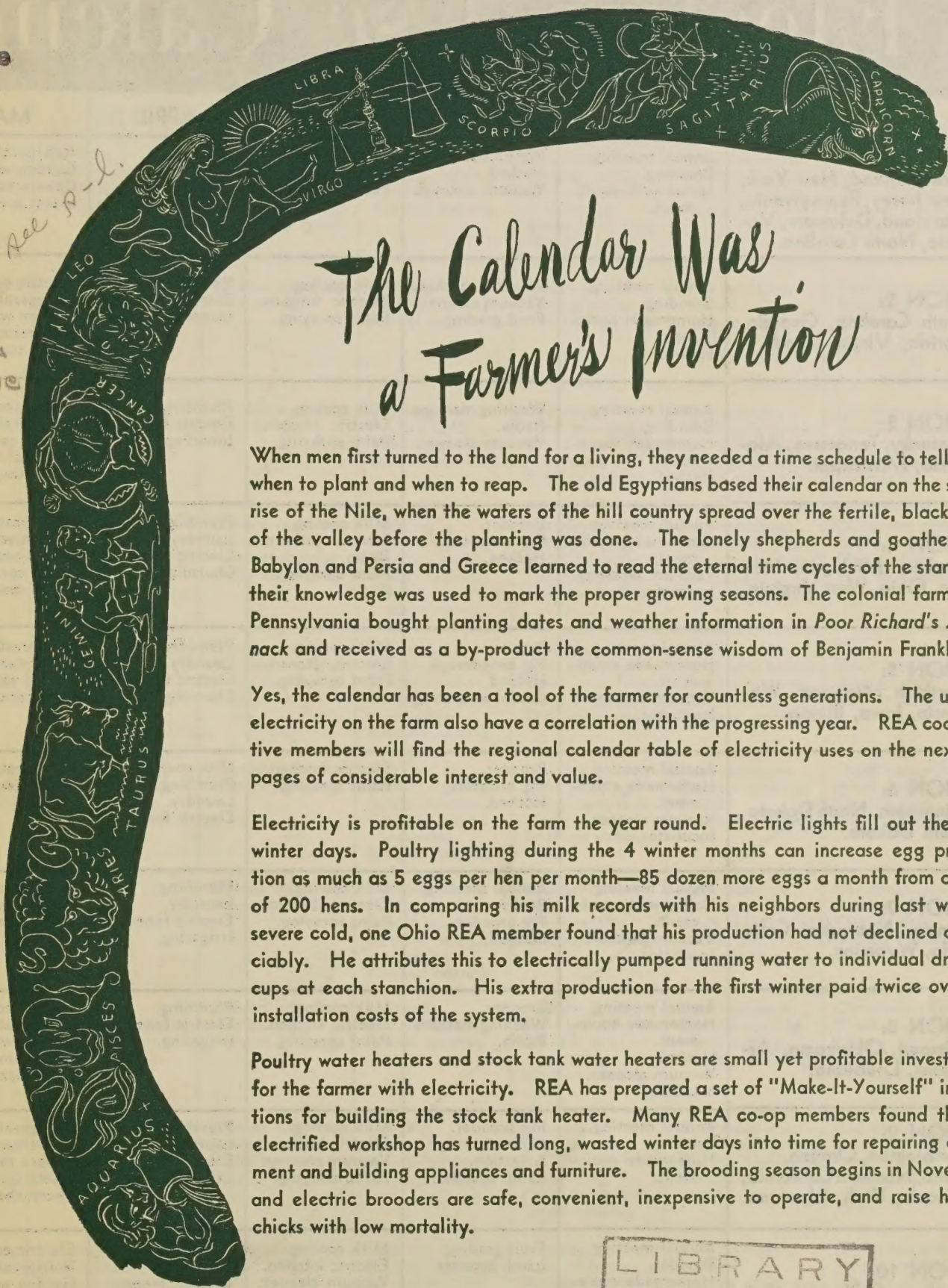
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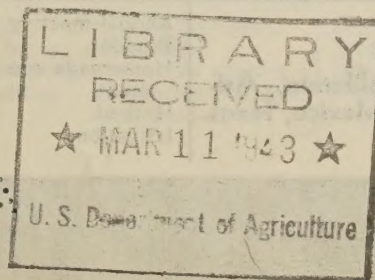
The Calendar Was a Farmer's Invention

When men first turned to the land for a living, they needed a time schedule to tell them when to plant and when to reap. The old Egyptians based their calendar on the spring rise of the Nile, when the waters of the hill country spread over the fertile, black acres of the valley before the planting was done. The lonely shepherds and goatherds of Babylon and Persia and Greece learned to read the eternal time cycles of the stars, and their knowledge was used to mark the proper growing seasons. The colonial farmers of Pennsylvania bought planting dates and weather information in *Poor Richard's Almanack* and received as a by-product the common-sense wisdom of Benjamin Franklin.

Yes, the calendar has been a tool of the farmer for countless generations. The uses of electricity on the farm also have a correlation with the progressing year. REA cooperative members will find the regional calendar table of electricity uses on the next two pages of considerable interest and value.

Electricity is profitable on the farm the year round. Electric lights fill out the short winter days. Poultry lighting during the 4 winter months can increase egg production as much as 5 eggs per hen per month—85 dozen more eggs a month from a flock of 200 hens. In comparing his milk records with his neighbors during last winter's severe cold, one Ohio REA member found that his production had not declined appreciably. He attributes this to electrically pumped running water to individual drinking cups at each stanchion. His extra production for the first winter paid twice over the installation costs of the system.

Poultry water heaters and stock tank water heaters are small yet profitable investments for the farmer with electricity. REA has prepared a set of "Make-It-Yourself" instructions for building the stock tank heater. Many REA co-op members found that an electrified workshop has turned long, wasted winter days into time for repairing equipment and building appliances and furniture. The brooding season begins in November, and electric brooders are safe, convenient, inexpensive to operate, and raise healthy chicks with low mortality.



Electric Use Calendar for REA Members

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
REGION 1: New England, New York, New Jersey, Pennsylvania, Maryland, Delaware, Vir- ginia, North Carolina.	Annual meeting. Brooding. Homemade equip- ment.	Pig brooder. Hotbed. Vacuum cleaner.	Milk cooling. Electric kitchen. Paint spraying.	Plumbing. Laundry. Electric fence. Cream separating.	Refrigerating. Garden watering. Cheese making. Insect spraying.	Electric cooking. Dairy water heating. Ice cream freezing. Tobacco curing. Insect trap.	Canning. Electric fan. Running water. Fruit grading.	Garden watering. Cider pressing. Harvest cooking. Dairy sterilizing. Cranberry grad- ing.	Lighting. Poultry lighting. School lunches. Kitchen heating.	Laundry. Feed grinding. Chick water warming. Dairy barn fans. Wood cutting.	New members. Stock tank heater. Electric cooking. Radio.	Christmas gifts. Small appliances. Electric shop. Sewing machine. Incubating.
REGION 2: South Carolina, Georgia, Florida, Virgin Islands.	Annual meeting. Brooding. Homemade equip- ment. Hotbed.	Washing machine. Vacuum cleaner. Fruit grading.	Milk cooling. Electric kitchen. Paint spraying.	Plumbing. Electric fence. Insect spraying.	Electric cooking. Refrigerating. Garden watering. Ice cream freezing. Insect trap.	Dairy water heating. Tobacco curing.	Canning. Sweetpotato curing. Electric fan. Running water.	Garden watering. Hay curing.	Lighting. Poultry lighting. School lunches.	Laundry. Feed grinding. Kitchen heating.	New members. Hotbed. Electric cooking. Radio. Wood cutting.	Christmas gifts. Small appliances. Electric shop. Sewing machine. Incubating.
REGION 3: Kentucky, Tennessee, Ala- bama, Mississippi.	Annual meeting. Brooding. Homemade equip- ment. Hotbed.	Washing machine. Radio. Vacuum cleaner.	Milk cooling. Electric kitchen. Paint spraying.	Plumbing. Electric fence. Insect spraying.	Electric cooking. Refrigerating. Garden watering. Ice cream freezing. Insect trap.	Dairy water heating. Tobacco curing.	Canning. Sweetpotato curing. Electric fan. Running water.	Garden watering. Hay curing.	Lighting. Poultry lighting. Tobacco grading. School lunches.	Laundry. Feed grinding. Chick water warming. Kitchen heating.	New members. Stock tank heater. Electric cooking. Sausage grinding. Wood cutting.	Christmas gifts. Small appliances. Electric shop. Sewing machine. Incubating.
REGION 4: Southern Michigan, Indi- ana, Ohio, West Virginia.	Annual meeting. Homemade equip- ment. Vacuum cleaning. Incubator.	Brooder. Pig brooder. Hotbed.	Milk cooling. Electric kitchen. Radio. Paint spraying.	Plumbing. Laundry. Electric fence. Churning.	Refrigerating. Garden watering. Cream separating. Insect spraying. Sheep shearing.	Electric cooking. Dairy water heating. Ice cream freezing. Insect trap.	Canning. Electric fan. Running water. Fruit grading.	Garden watering. Cider pressing. Harvest cooking. Dairy sterilizing.	Lighting. Poultry lighting. Tobacco grading. School lunches. Chick water warming.	Laundry. Feed grinding. Dairy barn fans. Wood cutting. Ensilage cutting.	New members. Stock tank heater. Electric cooking. Corn shelling. Sausage grinding.	Christmas gifts. Small appliances. Electric shop. Sewing machine.
REGION 5: Northern Michigan, Wis- consin, Iowa, Illinois.	Annual meeting. Homemade equip- ment. Vacuum cleaner. Incubator.	Brooder. Pig brooder. Hotbed. Cream separating.	Milk cooling. Electric kitchen. Paint spraying.	Plumbing. Laundry. Electric fence. Churning.	Refrigerating. Garden watering. Cheese making. Insect spraying.	Electric cooking. Dairy water heating. Ice cream freezing. Insect trap.	Canning. Electric fan. Running water.	Garden watering. Harvest cooking. Dairy sterilizing. Cranberry grad- ing.	Lighting. Poultry lighting. School lunches. Chick water warming. Kitchen heating.	Laundry. Feed grinding. Dairy barn fans. Wood cutting. Ensilage cutting.	New members. Stock tank heater. Electric cooking. Corn shelling. Sausage grinding.	Christmas gifts. Small appliances. Electric shop. Sewing machine.
REGION 6: Minnesota, North Dakota, South Dakota.	Annual meeting. Homemade equip- ment. Vacuum cleaner. Incubator.	Brooder. Pig brooder. Hotbed.	Electric kitchen. Paint spraying.	Milk cooling. Plumbing. Laundry. Electric fence.	Refrigerating. Garden watering.	Electric cooking. Dairy water heating. Ice cream freezing.	Canning. Electric fan. Running water.	Garden watering. Harvest cooking.	Lighting. Poultry lighting. School lunches. Chick water warming. Kitchen heating.	Laundry. Feed grinding. Dairy barn fans. Wood cutting. Ensilage cutting.	New members. Electric cooking. Radio. Sausage grinding.	Christmas gifts. Small appliances. Electric shop. Sewing machine.
REGION 7: Kansas, Nebraska, Colo- rado, Wyoming.	Annual meeting. Homemade equip- ment. Vacuum cleaner. Incubator.	Annual meeting. Brooder. Pig brooder. Hotbed.	Milk cooling. Electric kitchen. Paint spraying.	Plumbing. Laundry. Electric fence. Irrigating.	Refrigerating. Garden watering. Sheep shearing.	Electric cooking. Dairy water heating. Ice cream freezing.	Canning. Electric fan. Running water.	Garden watering. Harvest cooking.	Lighting. Poultry lighting. School lunches. Chick water warming. Kitchen heating.	Laundry. Feed grinding. Wood cutting. Ensilage cutting.	New members. Electric cooking. Stock tank heater. Radio. Corn shelling.	Christmas gifts. Small appliances. Electric shop. Sewing machine.
REGION 8: Missouri, Oklahoma, Ar- kansas, Louisiana.	Annual meeting. Homemade equip- ment. Hotbed. Vacuum cleaner. Incubator.	Brooder. Washing machine. Radio.	Milk cooling. Electric kitchen. Paint spraying.	Plumbing. Electric fence. Irrigating.	Electric cooking. Refrigerating. Garden watering. Ice cream freezing. Insect spraying.	Dairy water heating. Insect trap.	Canning. Sweetpotato curing. Electric fan. Running water.	Garden watering. Hay curing. Harvest cooking.	Lighting. Poultry lighting. School lunches.	Laundry. Feed grinding. Chick water warming. Kitchen heating.	New members. Electric cooking. Wood cutting. Sausage grinding.	Christmas gifts. Small appliances. Electric shop. Stock tank heater. Sewing machine.
REGION 9: Washington, Oregon, Idaho, Northern California, Nevada, Utah, Montana.	Annual meeting. Brooder. Homemade equip- ment.	Pig brooder. Hotbed. Irrigation. Lamb brooder.	Milk cooling. Electric kitchen. Vacuum cleaner. Paint spraying.	Plumbing. Laundry. Electric fence. Cream separating.	Refrigerating. Garden watering. Cheese making. Insect spraying. Sheep shearing.	Electric cooking. Dairy water heating. Ice cream freezing. Insect trap.	Canning. Electric fan. Running water. Fruit grading.	Garden watering. Cider pressing. Dairy sterilizing. Cranberry grad- ing.	Lighting. Poultry lighting. School lunches. Kitchen heating.	Laundry. Feed grinding. Chick water warming. Dairy barn fans. Wood cutting.	New members. Stock tank heater. Electric cooking. Sewing machine. Radio.	Christmas gifts. Small appliances. Electric shop. Incubating.
REGION 10: Southern California, Ari- zona, New Mexico, Texas.	Annual meeting. Brooder. Homemade equip- ment. Hotbed. Irrigation.	Fruit grading. Lamb brooder.	Milk cooling. Electric kitchen. Vacuum cleaner. Paint spraying.	Plumbing. Laundry. Electric fence. Sheep shearing.	Electric cooking. Refrigerating. Garden watering. Ice cream freezing. Insect spraying.	Dairy water heating. Insect trap.	Canning. Sweetpotato curing. Electric fan. Running water.	Garden watering.	Lighting. Poultry lighting. School lunches.	Laundry. Feed grinding. Kitchen heating. Wood cutting.	New members. Hotbed. Electric cooking. Sewing machine. Radio.	Christmas gifts. Small appliances. Electric shop. Incubating.

REA members with electric hotbeds start their early plants several weeks before the first sign of spring. During the farrowing and lambing seasons, easily built electric brooders will reduce loss of young pigs and lambs from cold or smothering. Although proper cooling of milk is vital at all times, from the first warm days of March on through the summer electric cooling keeps milk at high quality so that it brings better prices at the creamery. As the cattle are turned out for fresh pasture, cheap, inexpensive electric fencing enables farmers easily to change the pasture areas.

The disastrous effect of spring, summer, and autumn dry spells is eliminated through garden watering. Wise watering even with comparatively normal rainfall will increase truck-crop production by half or more. Hot-weather ventilation is important in the barns as well as the house. Electric fans keep the air pleasant and fresh at very low cost. With the beginning of the canning season, lucky is the farm wife who has an electric range with complete temperature control.

School starts in September, which reminds us that REA power is used in thousands of schools throughout the United States. Many schools have school lunch programs using electricity for refrigeration and cooking. Ensilage cutting is done better and more cheaply electrically. Preparation of feed with electric grinders and mixers saves up to 50 percent of the cost of commercially advertised feeds—and home-grown grain is used.

Thanksgiving is turkey season, and turkey growers everywhere use electric brooders with great success. On many REA systems Christmas has become an electrical holiday. Every member of the family wants electric gifts, and individual and community lights add to the fun. And with the beginning of the new year comes the electric cooperative annual meeting.

Electricity does the farm chores in season and out. It costs less, works dependably, increases cash income. Some farm work is not seasonal, especially women's work. Washday comes every week. Meals must be cooked three times a day. Electricity washes and cooks, summer and winter alike. Many farm women buy clothes and shoes and sugar from egg money; but eggs must be kept fresh. The electric sewing machine and vacuum cleaner are handy about the house. Finally, every farm needs running water all the time—water to drink, water for bathing, water for laundry, water for the garden. Electricity pumps willingly, faithfully, all the year round.

Rural Electrification Administration + U. S. Department of Agriculture

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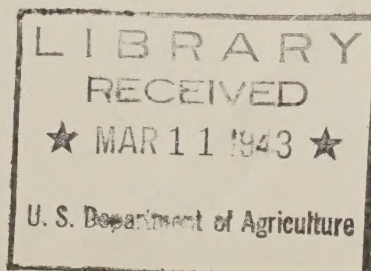


Can you afford to operate an **UNELECTRIFIED** farm?



A SMALL electric motor working tirelessly, dependably, hour after hour, will equal the hand production for some types of farm labor of three men and a boy. Such a motor will work for $1\frac{1}{2}$ cents per hour. Can you afford to compete with electricity for wages that low?

On many jobs—feed grinding, water pumping, chick brooding—electricity works alone. Your time and strength is saved for more productive labor. Whether you farm 3 or 300 acres electricity offers you new opportunities for profitable farming. In addition, your REA cooperative will help you finance the initial cost of wiring, plumbing, and appliances. The first cash investment is low. You can pay cost of power plus small monthly financing charges out of profits. As a bonus you get good electric lights and electric power for the radio, hand iron, water pump, and dozens of other important farm and home uses.



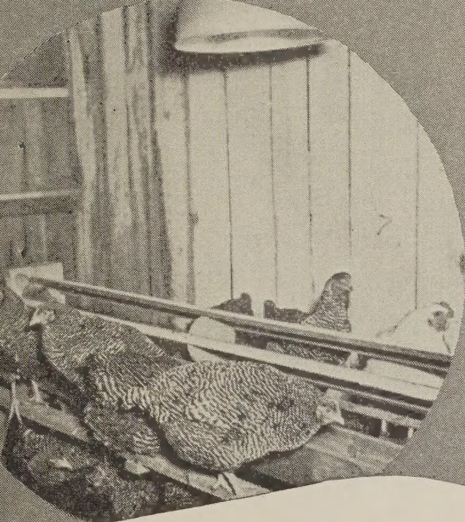


ELECTRIC CHICK BROODING — Electric brooding costs an average of 2.5 cents per chick compared to coal at 2.7 cents or 3.2 cents for oil. In addition to operating savings, the electric brooder permits cold-room brooding resulting in low mortality, fewer barebacks, and healthier chicks. Fire hazard is decreased and the automatic control feature permits you to use your nights for sleeping instead of tending brooders.

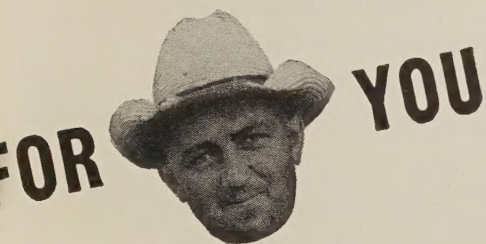
ELECTRIC POWER MAKES MONEY

FEED GRINDING AND MIXING—Feed grinding at home costs about 1½ cents per hundred-weight compared to commercial grinding at 5 to 8 cents. Mixing costs come to less than 2 cents per ton of feed. By grinding and mixing feed at home electrically, you save from 30 to 50 per cent under commercially advertised feed costs.





POULTRY LIGHTING—During the 4 winter months hen-house lighting will increase egg production about 5 eggs per hen per month. For 200 hens the increased production totals more than 300 dozen eggs, worth \$70 to you. Wiring the poultry house for lights will cost in the neighborhood of \$15, while cost of current for the entire 4 months is approximately \$1. Total profit: \$54.



GARDEN WATERING—Electric water pumping for a quarter-acre garden will increase vegetable profits from \$13 to \$40 for the season. Cost of home-built rotary-type sprinkler totals \$2.85, plus cost of hose. A thorough 1-inch night drenching for one-quarter acre can be laid in 7 or 8 hours at a pumping cost of 25 cents, or approximately \$2 for 8 drenchings during the growing season. Extra profit: \$8 to \$30 per season.



MILK AND CREAM COOLING—Electrically cooled milk stays fresh and pure, gets top grade rating and prices at the creamery. Cooling costs about 10 cents per day for 10 gallons of milk, including depreciation and operation. Electric cooling is clean, convenient, and easier to obtain and 75 percent cheaper than ice.

BECOME AN "EFFECTIVE" USER OF ELECTRICITY AT LOW COST

AN EFFECTIVE farm user of electricity is able to increase his cash income, decrease manual labor, and add to his comfort and enjoyment of living. A member of a rural electric system can do these things with a medium or very low investment in equipment.

Consider, for example, a small farm with a house of about 5 rooms, a medium-sized barn, and poultry house—1 cow, a few hogs, 150 chickens. The table of costs for equipment and electricity consumption show how electricity can be used effectively at small expense. The average monthly power consumption for this farm—which may be similar to your farm—is 63 kilowatt-hours, costing about \$4. The wiring is adequate with plenty of outlets and switches for immediate and future household and farm uses. Fixtures and floor and table lamps are available from the REA cooperative office in special combinations at low cost. Although a complete plumbing installation is not listed here, the REA plumbing procedure brings the cost of plumbing within reach.

REA is authorized to finance wiring, plumbing, and purchase of appliances for members of rural electric systems. Financing is liberal—5 percent simple interest, repayable over periods up to 5 years.

EQUIPMENT	Estimated Initial Cost	Average Monthly Consumption
Wiring job (house and barn).....	\$50.00*	
Lighting fixtures (including yard light).....	20.00*	20 kw.-hr.
IES floor and table lamps.....	9.95*	
Iron.....	3.50*	
Radio.....	10.00*	8 kw.-hr.
Pump jack and motor.....	30.00*	5 kw.-hr.
Wiring for poultry house lighting.....	15.00*	8 kw.-hr.
Poultry-water warmer (home-made).....	1.00	
1/4-horsepower portable motor (rigged at home).....	12.50	2 kw.-hr.
Chick brooder (home-made).....	18.50	10 kw.-hr.
Pig brooder (home-made).....	3.75	5 kw.-hr.
TOTAL...	\$174.20	63 kw.-hr.

* Can be financed through REA cooperative.

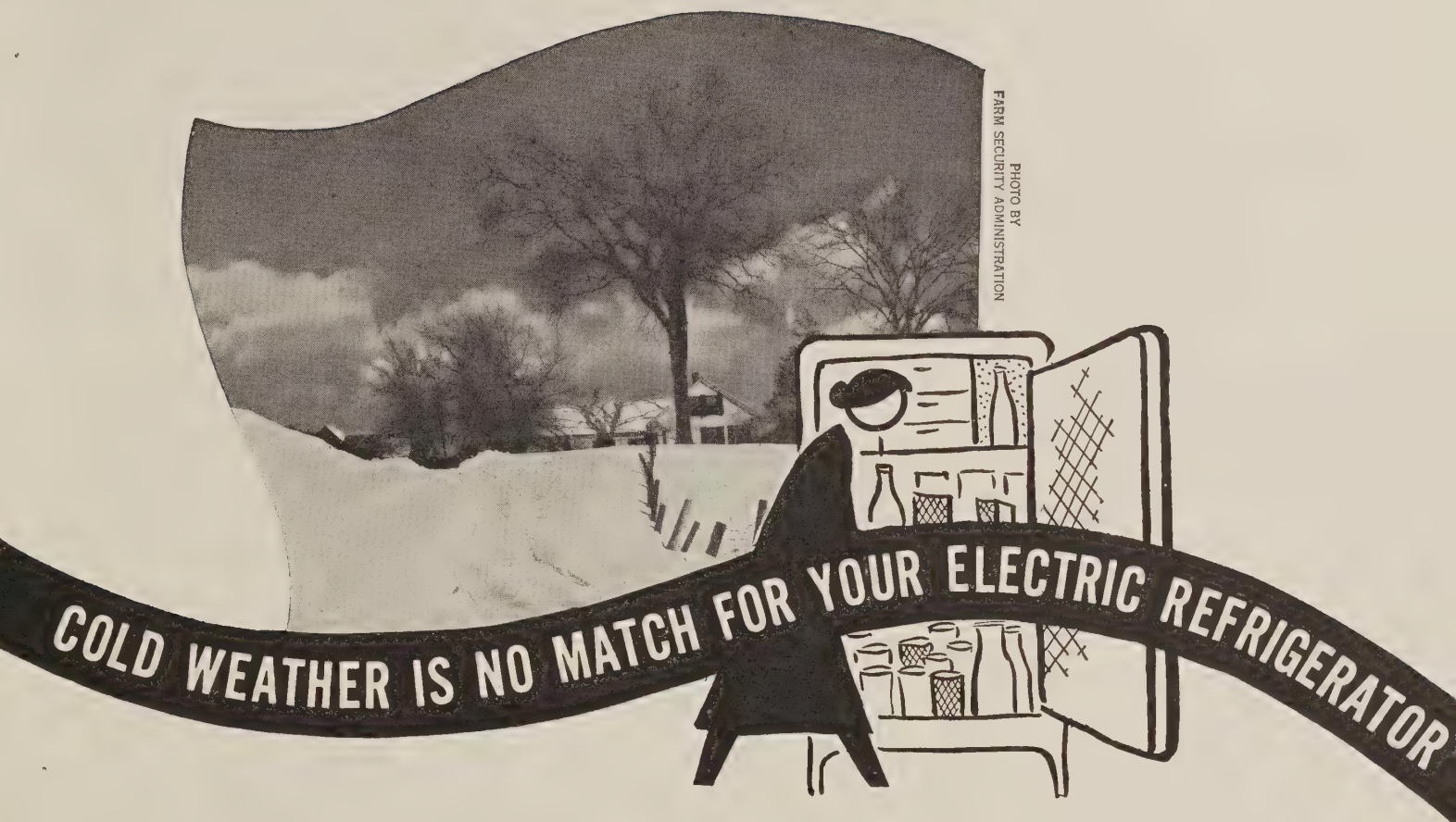
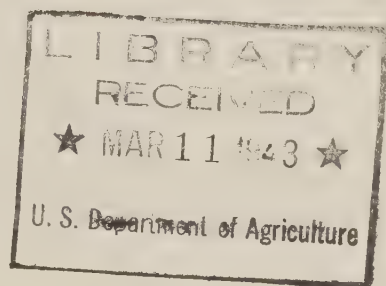


PHOTO BY
FARM SECURITY ADMINISTRATION

NO MATTER how cold your winters, there is no substitute for electric refrigeration.

Modern science has designed the electric "ice-box" for year around use. Nature never guarantees the regular, safe temperatures needed day-in and day-out for proper food care. Your electric refrigerator does guarantee constant, controlled temperatures, all weather, all seasons.

Let your electric refrigerator save for you summer, fall, winter, spring. It cuts down waste from food-spoilage, keeps left-overs usable. Regardless of weather, its even temperature saves food and health, provides year around meals that tempt family appetites. It proves that a penny saved is a penny earned.



ELECTRIC

REFRIGERATION • BETTER FOOD • BETTER HEALTH



YOU can't detect microbes with your naked eye. But you know very well how fast fresh food spoils in any weather without chilling. And sometimes things go bad before you know it. The result may be sickness. Electric refrigeration helps keep the doctor away.

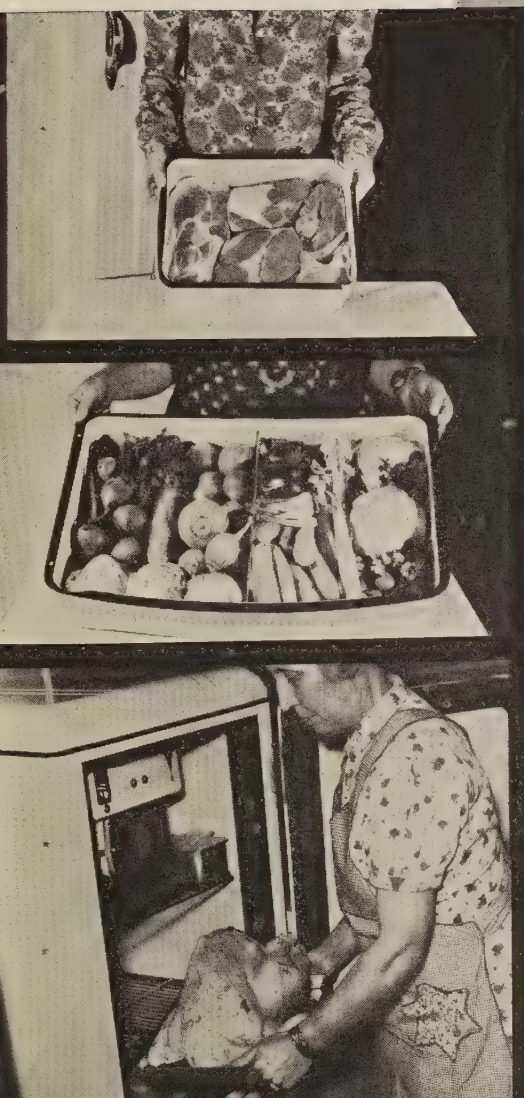
Your food stays fresh many times longer. You can keep milk sweet and butter firm. Vegetables stay crisp and tender, meats remain savory. With an ordinary electric refrigerator you can use your garden to the fullest advantage. Choice cuts of fresh-killed meat remain fresh. Whether it's a watermelon on July 4, or a turkey at Christmas, an electric refrigerator means fresher food.

An electric refrigerator puts new variety in your menu all year around. Ice creams, frozen salads, delicious refrigerator cakes and cookies are easy and quick to make. There is new zest in your meals. Farm housewives may now work miracles in the way of tasty tables.

Healthy appetites deserve healthy food, flavored at its natural best. Winter and summer, the whole family gets the benefits of an electric refrigerator—and most important, it keeps them on the road to good health the whole year through.

ALTH

PLAN AHEAD FOR YOUR ALL-ELECTRIC KITCHEN . . .



Economy, convenience, safety—you get all three in abundance from electric appliances. Begin thinking now in a practical way about the full use you will make of electricity in the future. When you install your electric refrigerator, have it properly placed so that other electric appliances you acquire later can be conveniently located.

With your goal an all-electric kitchen, each appliance may be placed to save steps and make meal-getting easier. From the very start, you should have a definite plan which takes account of the three main working "centers" in the kitchen . . .

1

The heart of the food-preparation center is the electric refrigerator. In a well-planned kitchen it should be possible to reach everything needed for a meal without walking back and forth across the kitchen.

2

The heart of the cleaning center is the sink, with running water pumped and heated by electricity.

3

The heart of the cooking center is the electric range.

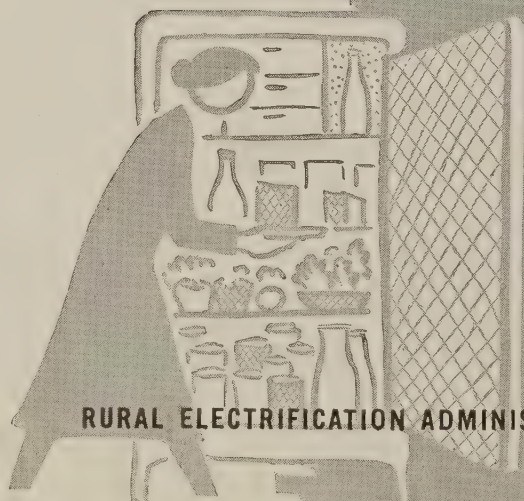
The three main centers should be so placed with relation to each other that useless steps and movements are eliminated. A good plan made in the beginning will save confusion later on.

Your CO-OP officials, and Extension Service workers can give you valuable advice in planning your all-electric kitchen. See them for full information.

TAKE A FARMER'S WORD FOR IT

"My ice bill in the summertime used to be more than my electric light bill, and now we have ice cream any time we want it. My wife says she saves enough on food to pay for the refrigerator, and it saves her a lot of work."

HOW TO GET THE MOST OUT OF YOUR ELECTRIC REFRIGERATOR



LOCATE REFRIGERATOR TO SAVE STEPS

Most of the time, this means in the kitchen, not on the back porch or in some hallway. Though kitchen heat from a wood stove may increase refrigerator operating cost slightly, the cost is usually more than made up for by food saving and convenience in use. Besides—if the kitchen is **too** hot, it's time to think about changing the ventilation or getting an electric range!

BE SURE TO DEFROST REGULARLY

Watch for that quarter-inch of frost on the cooling unit—then defrost. Failure to do so may raise refrigeration temperatures, and increase cost of operation. But never go picking at the frost with anything sharp.

ARRANGE FOOD SO AIR CIRCULATES

An overcrowded refrigerator means poor circulation of air and poor cooling. Leave space between your refrigerator dishes.

KEEP ALL FOODS COVERED

This will keep them in excellent condition and prevent foods like butter and milk from absorbing odors. (Of course foods with shell or rind need not be covered.)

WASH THE INTERIOR REGULARLY

The best way is to wash with a clean cloth and warm water with soda or borax in it. Wash the shelves with warm soapy water. When you've finished, dry the interior thoroughly.

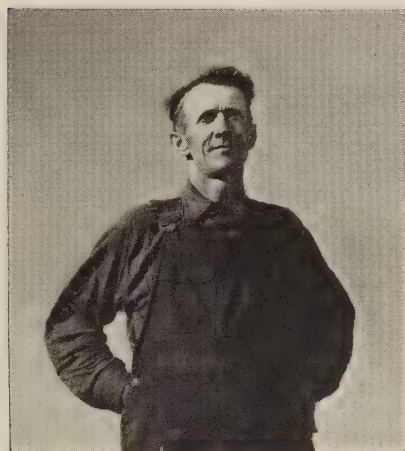
You'll find an electric refrigerator a faithful servant. You'll discover more and more that an electric refrigerator is not a luxury but a real necessity all the year around!

For further information on the advantages of electric refrigeration, consult your Extension Service workers, officials of your electric CO-OP, or write direct to REA, U. S. Department of Agriculture, Washington, D. C.

RURAL ELECTRIFICATION ADMINISTRATION • UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.



Electricity can change your future

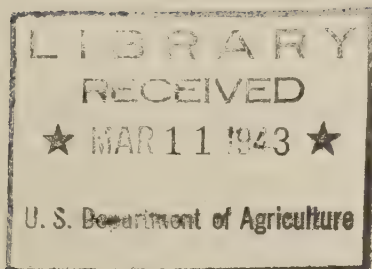


Mr. FARMER, you don't need a fortune teller's magic crystal to look into the future if you have electricity. There are certain things you can be pretty sure of.

For example, if you use electricity skillfully for production purposes, it will lighten your labors, speed up your farm tasks, put extra cash in your pocketbook. Electricity is doing these things for thousands of farmers today. It can do for you what it is doing for others in every section of the country.

Here are a few examples of the way electricity saves time and labor for the farmer and makes money. An electric cooler provides the dairyman with refrigeration at less than the cost of ice and he hauls no ice! An electric brooder raises the poultryman's chicks and he hauls no fuel, dumps no ashes! An electric motor grinds feed, cuts ensilage, pumps water with the flip of a switch—need never be cranked—never balks in winter weather! At every turn, electricity's easy power smooths the farmer's path, frees him from time-absorbing and money-losing labor.

The door to a larger income is always open for the farmer who has electricity. He can go forward in many directions his resourcefulness will suggest. In addition, electricity brings many new practices to agriculture, that are profitable and easy to apply, undreamed of in the past. Electric hot-beds, lighted poultry houses, electric bug electrocutors, electric spray pumps, electric irrigation; no matter what his type of farming, the farmer who has electricity faces the future with new opportunities for making a more substantial living from farming and a better life for every member of the farm family.





ELECTRICITY'S

Ask a farmer who uses electricity in his farm operations what he thinks about it. Chances are he'll say: "Electricity is a money-maker; with it you can save work, save time, and cash-in on improved products in better markets."

Read the letters on these pages, written by farm people served by REA lines. Think over the things farmers from every section of the country have to say about electricity, based on their own experience with it as a money-earner. Pretty soon you'll be certain in your own mind that you want to turn loose to the full electricity's power, speed, labor-saving and money-making ability on your farm, too.

SAVE MONEY, MAKE MONEY, IMPROVE YOUR PRODUCT WITH ELECTRICITY

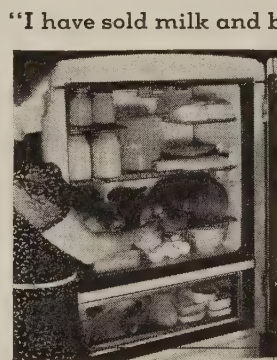


WITH AN ELECTRIC BROODER:

"For years I brooded chicks with a coal burning brooder stove with very good success. The fuel cost was about \$15.00 per year. This year, our REA Cooperative plant was in operation. We purchased an electric brooder. Not only did we raise the finest bunch of chicks, but the heating cost was actually less than half, as near as we could figure it, for the same length of time or around 30 days—about three-fourths of a cent per chick."

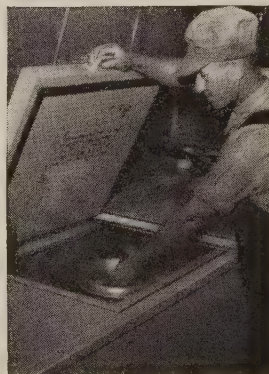
THIS WASHINGTON FARMER MADE MONEY

THIS SOUTHERN FARM WOMAN MADE MONEY WITH ELECTRIC REFRIGERATION:



"I have sold milk and butter in a small way for years. Before we got electricity we bought ice for about 4 months, which cost us about \$9 a year. But I could not keep all my milk in salable condition, and some of my butter was not strictly fresh when delivered. Now, with electric refrigeration, I can sell all I can spare of butter, buttermilk, and sweet milk. The net cost of electricity is \$6.28. But that is only part of the story. The increased sales of milk and butter due to my refrigerator must have been at least \$50, which pays all electric bills and leaves a profit of \$43.72."

THIS "BIG" TEXAS FARMER MADE MONEY WITH ELECTRIC REFRIGERATION:



"I am milking 108 head of cattle at present, and my ice bill alone has been from \$75 to \$80 per month. I sell Grade A milk to a big ice cream company. The milk I furnish must be cooled to under 50° F. This is my first month to receive electric service. I have received the full 30 days' service and used 688 kilowatt hours which operated an 18-can cooling unit which is doing double duty in cooling 28 cans of milk per day. Electric service for the month of June saved me \$58.54."

GREAT!"

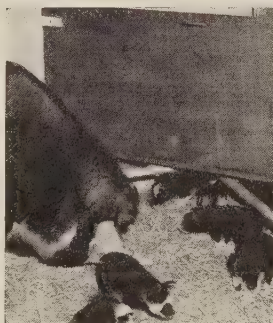


THIS ALABAMA FARMER MADE MONEY WITH ELECTRIC HOTBEDS:

"I purchase about \$125 worth of potato plants each year. Last year I installed a 20-sash electric hotbed for \$80 and raised a higher quality of plants at a current cost of \$5. I figure the equipment will last for 10 years, or \$8 depreciation per year, and I will save from \$75 to \$100 a year by growing my own plants."

THIS MINNESOTA FARMER MADE MONEY WITH ELECTRIC PIG BROODERS:

"Farrowing time is always a trying one for hog raisers. For myself, over a long span of years, I have lost on the average of about 2 pigs a litter. The sow often tramples some of her young to death. So I installed lights in pig brooders in the corners of the farrowing pens. My 6 sows farrowed a total of 54 pigs, an average of 9 to the sow. And I raised them all. . . . Without lights in the farrowing pens, I figured to lose 2 from each litter, or 12 in all. At \$5 per pig, the lights meant a clear saving of \$60 to me—enough to pay my entire electric bill for a year."



THIS GEORGIA FARMER LEARNED HOW TO MAKE MONEY WITH ELECTRIC INSECT TRAPS:



"I installed electric light traps on 3 acres of tomatoes for controlling tomato worms. I also had 17 acres of tomatoes in which light traps were not used. The control on the 3 acres was almost 100 percent. On the fields without insect traps 90 percent of the tomatoes were infested. Assuming that I could have gotten equal results on the 17 acres, I estimate that if I had used insect traps, I could have paid for the entire installation cost the first year and made at least \$3,000 profit."

THIS MICHIGAN FARMER MADE MONEY WITH AN ELECTRIC FEED GRINDER:



"As we are milking about 40 dairy cattle and are feeding around 60 young cattle and feeders, we need from 1½ to 2 tons of dairy feed per week. To the man with that many cattle to feed, a half-horse hammer feed grinder looks rather small, but I agreed to try one. . . . I am more than pleased with the results. As near as we can figure, it cost approximately 1 cent per hundred pounds to have the right amount of feed ground each day as compared to 10 cents per hundred pounds in the old way of grinding."

ELECTRIC LIGHTS IN THE POULTRY HOUSE:



THIS VIRGINIA FARM WOMAN MADE MONEY BY PUTTING

"For years I have been reading about using electric lights in the hen house to increase egg production. We have two hen houses and I divided the flock equally with 150 hens in each house. . . . I put the lights in only one house and for a month I kept strict account of egg production. I found that the hen house which had lights produced on an average of 63 eggs a day while the house that did not have lights yielded only 40 eggs a day. With eggs selling at 43 cents a dozen, I made at least 85 cents a day extra because of electric light."

MIGHTY LITTLE MONEY DOES A LOT OF WORK—WITH ELECTRICITY

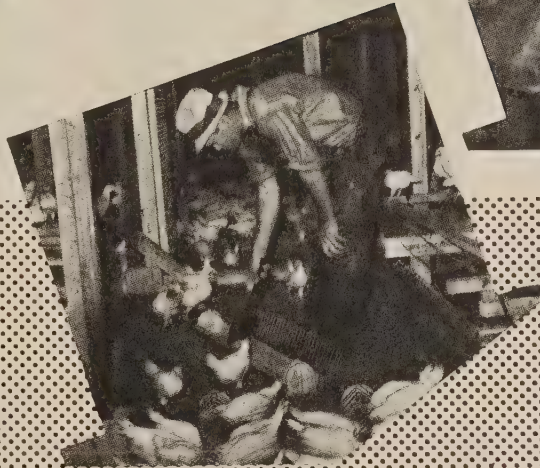
Today there are over 200 uses for electricity on the farm. Farmers know that electricity turns out a great deal of work at very low cost. And the more electric equipment a farmer uses, the lower the power cost for each kilowatt-hour (kwh.) used. . . . Listed below are average consumption figures in kilowatt-hours of various pieces of farm electrical equipment. Check it over, keeping needs on your own farm in mind. Plan ahead for the kind of equipment you need to save work and increase your income. You'll find it's a real investment.

THE MORE YOU USE THE CHEAPER IT GETS

Apple butter stirrer.....	1/3 kwh. per gallon
Apple cider mill (small jobs).....	1 kwh. per 100 gallons
Barn ventilator (during season).....	2 1/2 kwh. per cow per month (variable)
Bone grinder.....	22 kwh. per ton
Bottle washer.....	1/2 kwh. per 1,000 bottles
Brooder.....	1/2 kwh. per chick raised
Churn.....	1 1/2 kwh. per 100 pounds of butter
Clipper (for horse or cow).....	1/10 kwh. per hour of use
Concrete mixer.....	1/2 kwh. per cubic yard of concrete
Corn husker-shredder.....	30 kwh. per 100 bushels of corn husked
Corn sheller.....	1 kwh. per 30 bushels of shelled corn (variable)
Cream separator.....	1/2 kwh. per 1,000 pounds of milk
Dairy refrigerator (during season)	
30 kwh. per 10 gallons of milk daily per month	
Dairy water heater.....	1 kwh. per 5 gallons of hot water (145° F.)
Ensilage cutter.....	1 kwh. per ton
Electric fence.....	7 kwh. per month
Fly screen or trap (during season).....	5 kwh. per month
Grain elevator.....	4 kwh. per 1,000 bushels
Grain grinder.....	1/2 kwh. per 100 pounds
Grain, seed cleaner and grader.....	1 kwh. per 100 bushels
Green feed cutter and root shredder.....	2 kwh. per ton
Hay baler.....	2 1/2 kwh. per ton
Hay dryer.....	40 kwh. per ton of dry hay (variable)
Hay hoist.....	1/3 kwh. per ton
Hotbed.....	1 kwh. per square yard per day
Incubator.....	1 kwh. per 25 eggs set
Irrigation (surface).....	3 kwh. to raise an acre-foot of water 1 foot
Milking machine (portable).....	1 1/2 kwh. per cow per month
Milking machine (pipe line).....	2 1/2 kwh. per cow per month
Oyster-shell grinder.....	2 kwh. per ton
Paint sprayer.....	1 1/2 kwh. per 1,000 square feet
Poultry house lighting (during season).....	5 kwh. per 100 birds per month
Poultry water heater.....	1 kwh. per day of use
Sheep shearer.....	2 kwh. to shear 100 sheep
Straw cutter.....	2 kwh. per ton
Threshing machine.....	1 kwh. per 8 bushels of grain
Tool grinder.....	1/2 kwh. per hour of use
Ultraviolet lights for poultry.....	10 kwh. per 100 hens per month
Utility motor (small 1/4 hp.).....	1/2 kwh. per hour of use
Utility motor (3 and 5 hp.).....	1 kwh. per horsepower per hour of use
Water pump (shallow well).....	15 kwh. per month
Water pump (deep well).....	20 kwh. per month
Wood saw.....	2 kwh. per cord of wood

For more information on what electricity can do for your farm, now and in the future, talk to the Superintendent of your REA CO-OP and the extension service workers in your county. Or write to REA, Washington, D. C.

serve

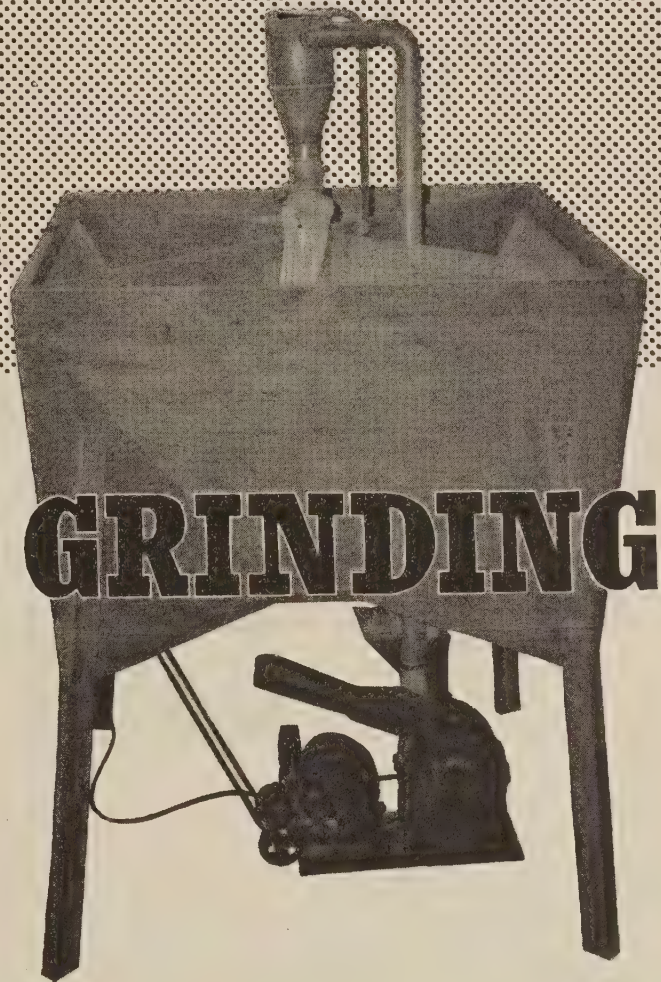


for added profits on the
ELECTRIFIED FARM

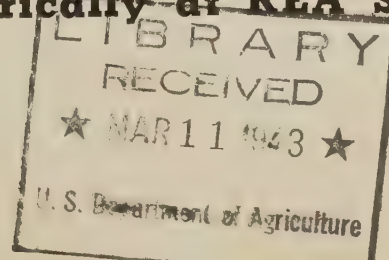
HOME FEED GRINDING

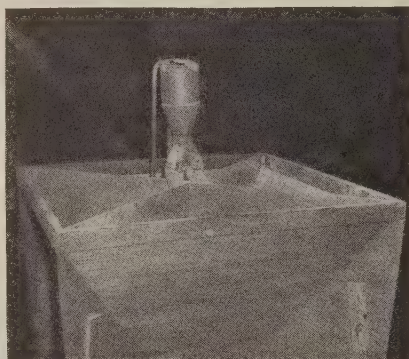
The small electric feed grinder

- feeds automatically from overhead bins, grinds while you do your chores.
- starts at the touch of a switch in any kind of weather.
- operates on $\frac{1}{8}$ to 1 kilowatt-hour per 100 pounds of feed.
- is powered by a portable motor useful for many other farm jobs.
- costs from $\frac{3}{8}$ to 2 cents per 100 pounds of grain.

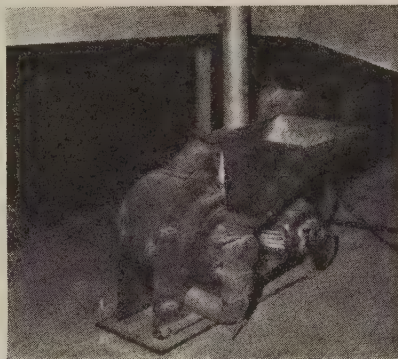


Grind home-grown grains electrically at REA System rates!





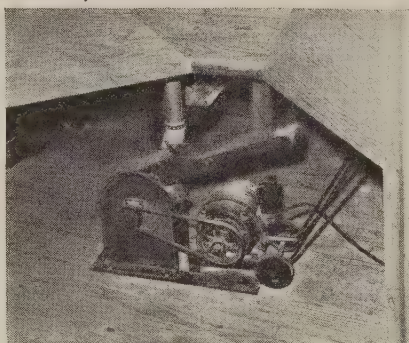
COMPACT.—This home-made bin has four sections, two for whole grain and two for ground feed. The spout is easily moved from one to another.



CONVENIENT.—Whole grains dumped into this hopper are elevated into the bin for storage, ready for grinding whenever the farmer wishes.



ANY FINENESS.—The proper fineness of grinding for each kind of livestock is easily obtained by interchanging screens of various sizes.



AUTOMATIC FEED.—While the farmer is doing other chores, grain flows from the overhead bin into the grinder, and is elevated to another bin for mixing or bagging.

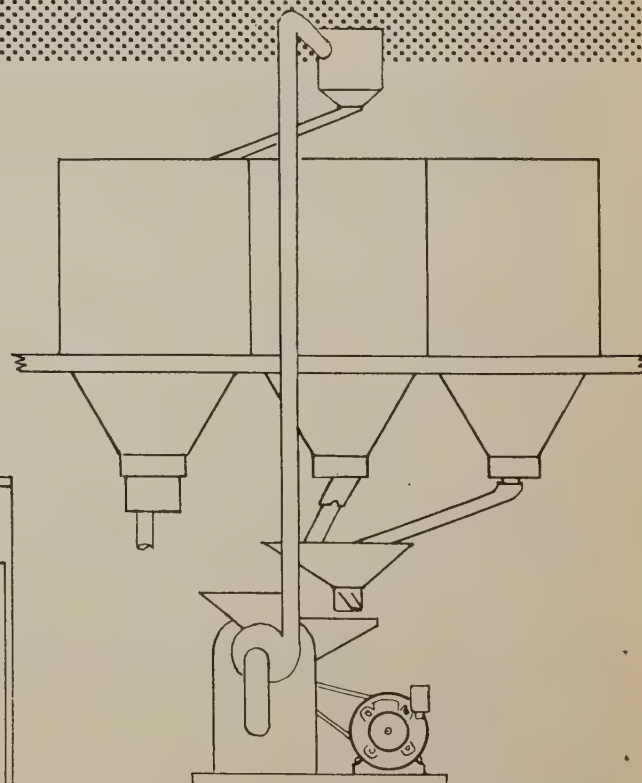
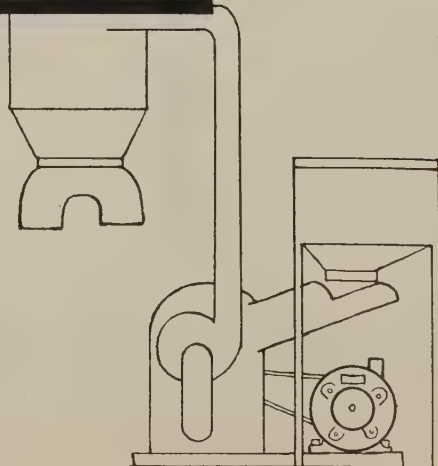
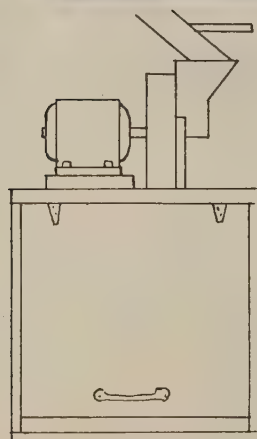


POWERFUL.—Snapped or husked ear corn is ground by hand feeding. Whole ears are reduced to coarse or medium fineness for a cost of about 1 cent per bag.



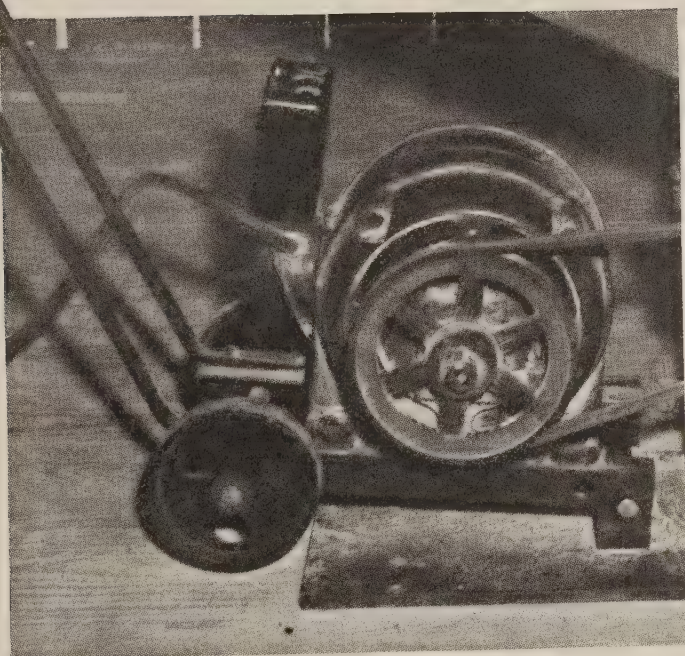
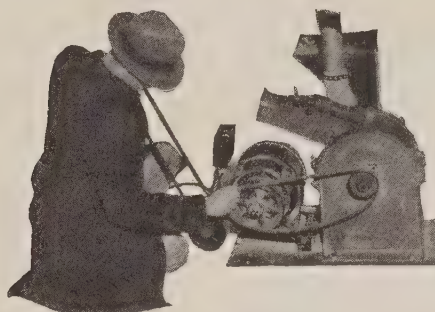
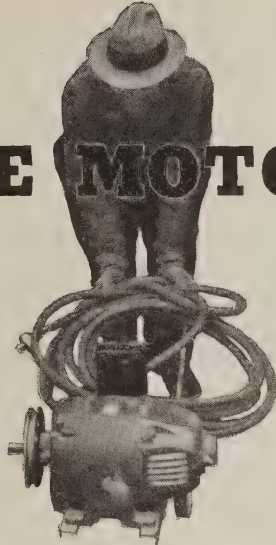
ADAPTABLE.—When used without bins, grain is elevated through a dust collector into bags. Special locks hold the bags while the operator pours grain into the hopper.

PLANS TO MEET THE NEEDS OF ANY FARM



THE MOTOR IS PORTABLE

(on belt-driven types)

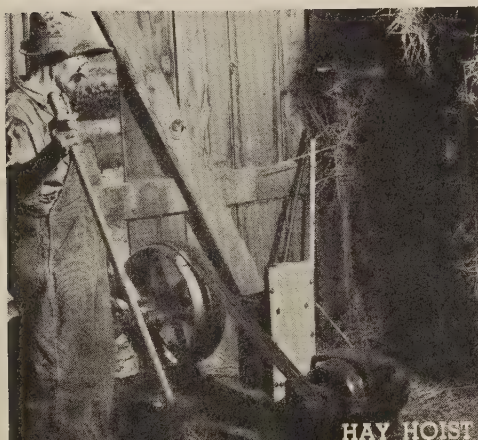


AND MANY OTHER JOBS

YOU CAN USE IT FOR THESE



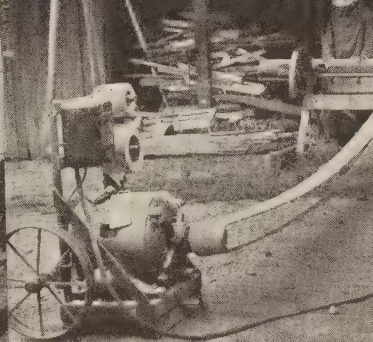
CONCRETE MIX



HAY HOIST

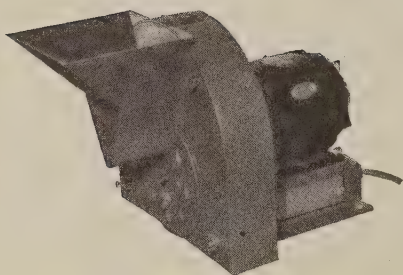


ENSILAGE CUTTER



CIRCULAR S

HERE ARE A FEW TYPICAL GRINDING COSTS:



COST OF GRINDING 100 POUNDS OF FEED WITH ELECTRICITY

	Fine	Medium	Coarse
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Shelled corn.....	$\frac{3}{4}$ - $2\frac{1}{4}$	$\frac{1}{2}$ -1	$\frac{1}{4}$ - $\frac{1}{2}$
Snapped corn		1- $1\frac{3}{4}$	$\frac{1}{4}$ - $\frac{3}{4}$
Husked ear corn.....		$\frac{3}{4}$ - $1\frac{3}{4}$	
Wheat	1- $3\frac{1}{4}$	$\frac{1}{2}$	$\frac{2}{5}$
Oats	$2\frac{3}{4}$ - $5\frac{3}{4}$	$\frac{1}{2}$ - $1\frac{1}{2}$	$\frac{1}{4}$ - $\frac{3}{4}$
Barley	$1\frac{1}{4}$ - $2\frac{3}{4}$	$\frac{1}{2}$ - $\frac{3}{4}$	$\frac{1}{4}$

(At the typical REA system power rate of 2 cents per kilowatt-hour)

HOW DOES **THIS** COMPARE WITH YOUR FEED GRINDING COST NOW?



"Last year I had 26 acres in wheat, 25 acres in oats, and 23 acres in corn. I use my grain mostly to feed my 16 cows and young stock, grinding it with an electric mill.

"I store the grain in bins right over the grinder. Whenever I want ground feed, all I have to do is open the chute and turn on the switch. While the feed is being ground, I do other chores around the barn, and when I come back the grinding is finished.

"My electric mill saves me half a day a week, which I used to spend sacking and loading grain, hauling it in to the custom mill, waiting while it was ground, and hauling it back again.

"On the coldest winter mornings, the electric motor starts the minute I press the switch. I've got the motor rigged up so I can use it for two or three other jobs, too.

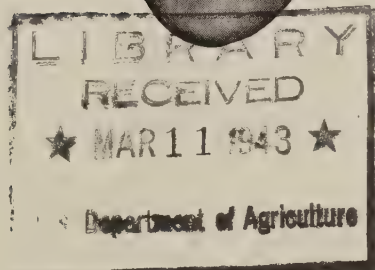
"Best of all is the amount of money it saves for me. I'm on the REA line, and when I got this feed grinder it put me right in the 2-cent power rate. Most of my grinding costs me less than a penny a bag; the oats take a little more. I've had the mill more than a year now, and it hasn't cost me a cent in repairs."

RURAL ELECTRIFICATION ADMINISTRATION · WASHINGTON, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE



Give and take



Membership in an electric co-op is a two-way bargain. There are rights, to be sure, but there are also responsibilities. Whether or not the co-op gives good service at low rates depends on the member. He ought to read his own meter, calculate his bills, and pay them promptly. He should keep informed about the business of his co-op; and he should help get new members, for every new member on the lines helps the co-op to succeed. Most important of all, he should always be on the lookout for new and profitable use for electricity on his farm. Increased power consumption works for him and at the same time helps the co-op.

***Nine ways
in which
you
can help
your co-op***



Meter reading and self billing. Accuracy and promptness on part of members save co-op expense and labor.



Attend annual meetings. Cooperation implies democracy. Every member should vote for directors and policies.



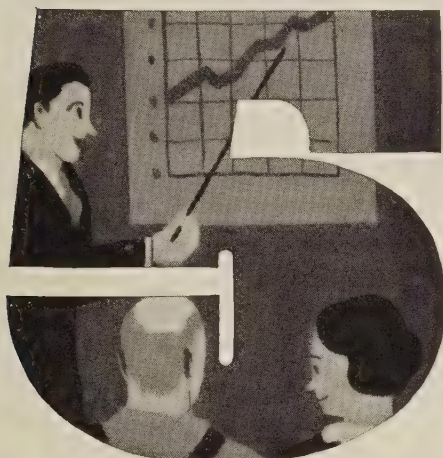
Use electricity abundantly. Increased use means profits for member and co-op alike. More power, lower cost.



Prompt payment. Good credit is vital to a co-op's success. Prompt payment by members keeps it good.



Patrol lines and report outages. Every co-op member should be a trouble shooter. Report outages immediately.



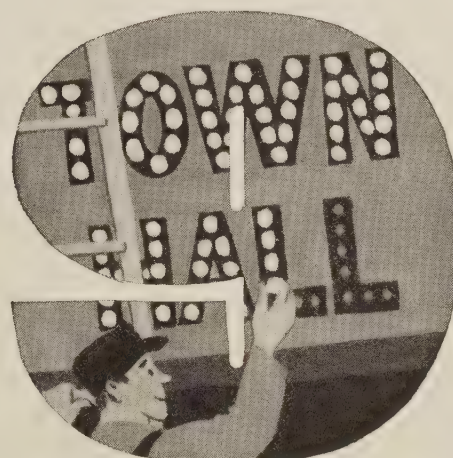
Keep informed on co-op affairs. A co-op member is also a business man. It is good business to keep informed.



Participate in co-op projects. Members help with monthly news letter, equipment shows, and other activities.



Encourage your neighbors to use more power. Electricity will help them as it has you. Tell them about it.



Build community power use. Help co-op and community by extending service to churches, schools and halls.



Helping your co-op helps you

In an electrical cooperative members are the owners and the co-op is operated for their benefit. Whatever helps the co-op helps the member owners.

From the time of its organization success of the cooperative depends upon the courage, determination, and effort put forth by members. Easements must be obtained. Neighbors along the lines have to be interviewed and "signed up." On some systems—"self help" cooperatives—members give still more assistance and sacrifice. Construction costs are reduced to the barest minimum through member participation in tree trimming, digging of post holes, and cutting and treating poles.

A real co-op is democratic; each member has one vote. Hence, each member is obligated to take active and intelligent interest in its management. A co-op cannot fail if its members are behind it.

**RURAL ELECTRIFICATION ADMINISTRATION
U. S. DEPARTMENT OF AGRICULTURE**



Keep 'em drinking, and avoid winter production slump

Warm water in the dairy barn, the hen house, and the stockyard will maintain winter production of milk, eggs, and meat. Electric water-warming equipment is simple to build, inexpensive to operate. Perhaps no other application of electricity on the farm with so small an initial outlay produces so large dividends in increased production. It also saves the labor of cutting ice or building fires to make water accessible to the animals.



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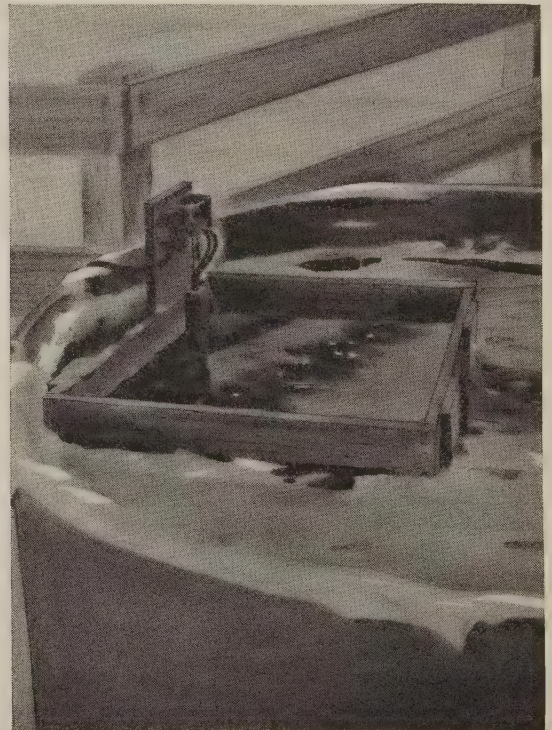
★ JAN 11 1943 ★

U. S. Department of Agriculture

Warm water means more eggs, meat, milk

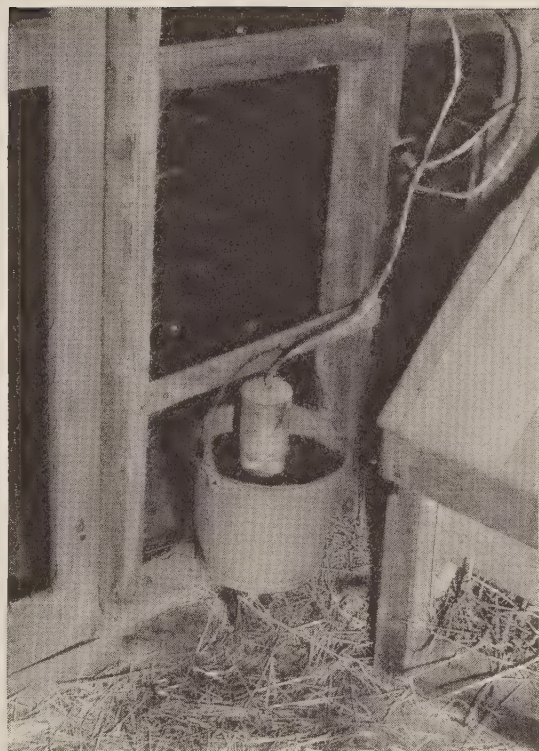
For the Dairy Herd.

Dairy cows are machines for milk production. An essential ingredient in milk “manufacture” is an abundance of water. The following are common causes of unnecessary declines in winter milk production: (a) Not providing continuous access to water; (b) failure to maintain an ice-free drinking area on the available sources of water; (c) tank so exposed that cows go thirsty rather than go after a drink. Many farmers keep production up and milk checks high by warming drinking water—by installing drinking cups at stanchions or tank in the loafing barn. A plentiful supply of warm water during the cold months will increase production by 10 percent or more, welcome when income is low.



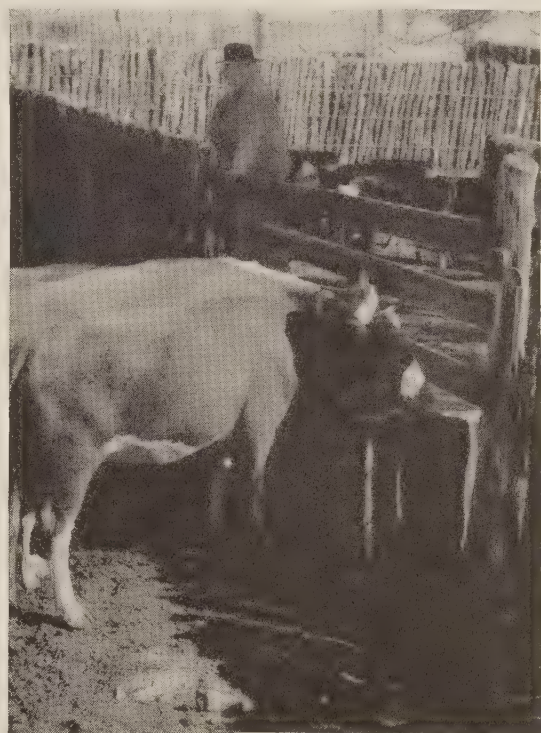
In the Hen House.

As every poultryman knows, egg production drops as abruptly as the mercury column when winter comes. What many of them do not know is that proper feeding, hen house lighting, and other sound practices may still fail to maintain high egg production if chickens refuse to drink plenty of water. They do refuse if the water is cold. A simple water warmer, consisting of a thermostat, heating element, and a cord, uses about one kw.-hr. per layer a season. It keeps water at about 50 degrees Fahrenheit, stimulates layers to drink more, eat more, lay more. According to the latest information, and based on present high price levels, warmed water increases the value of each layer's productivity by about 15 cents to 30 cents a year, \$40 more with 200 hens.



For General Livestock.

Watering troughs or tanks, free of ice in winter and easily accessible to stock at all times, add needed poundage to beef cattle and hogs. The drinking water temperature should be at about 40 degrees Fahrenheit to prevent ice formation. Heat generated in the animal body from digestion, assimilation, and exercise is in excess of the normal body needs. This excess heat will warm reasonable quantities of cold water, but few humans or animals will drink enough genuinely cold water to maintain maximum growth and health with water available only once or twice daily. A simple, electric stock tank water heater can be constructed for about \$15, will keep water at 40 degrees, and will operate, in a cold climate, on one-fourth kw.-hr. per animal per day.





Individual Drinking Cups Pay Off in More Milk

Producing dairy cows require more drinking water than any other farm animals. To insure maximum production and good health, dairy cows should have access to water at will. Therefore, watering troughs must not be allowed to freeze over. Automatic tank water warmers take care of this; however, a still more convenient system of supplying water to cattle is installation of individual drinking cups. With water before them constantly cows drink more. Experiment station reports show that cows with individual, automatic water bowls will produce up to 4 percent more milk than cows watered twice a day, up to 11 percent more than cows watered once a day. The difference in production is even greater during the cold weather months. When cows drink more they also eat more, another and extremely important item in increasing production.

Rural Electrification Administration, U. S. Department of Agriculture

Running Water at a Price You Can Afford

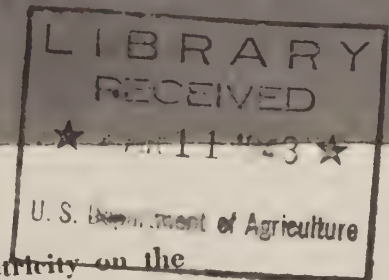


FOR THE KITCHEN

FOR THE BATHROOM

FOR THE BARN

FOR THE GARDEN



Running water, probably the greatest single benefit of electricity on the farm, is now within the reach of every farm family on REA power lines. REA plumbing specialists, working with equipment manufacturers, have developed a series of low-cost "packaged plumbing" units to bring running water, a modern kitchen and bathroom, and sanitary sewage disposal to your farm at a price far lower than ever before possible. In addition, your cooperative will invite you to watch and even help in actual installations, so that you and your neighbors may learn how to do much of the work yourselves. Savings in installation cost may run from 50 to 75 percent, depending upon the amount of work you do. Finally, liberal financing at low interest rates permits you to have running water now.

“Packaged Plumbing”

cut plumbing costs in half

Thousands of farm families on REA lines are now using modern lighting fixtures made available in the “packaged lighting” unit developed by REA in cooperation with equipment manufacturers. This was a revolutionary idea in merchandising and co-op members have benefited through large reductions in price. Now, the same principle has been adopted for plumbing. “Packaged plumbing” units contain necessary equipment and fixtures for a modern pressure water system, kitchen sink, bathroom, and sewage disposal system.

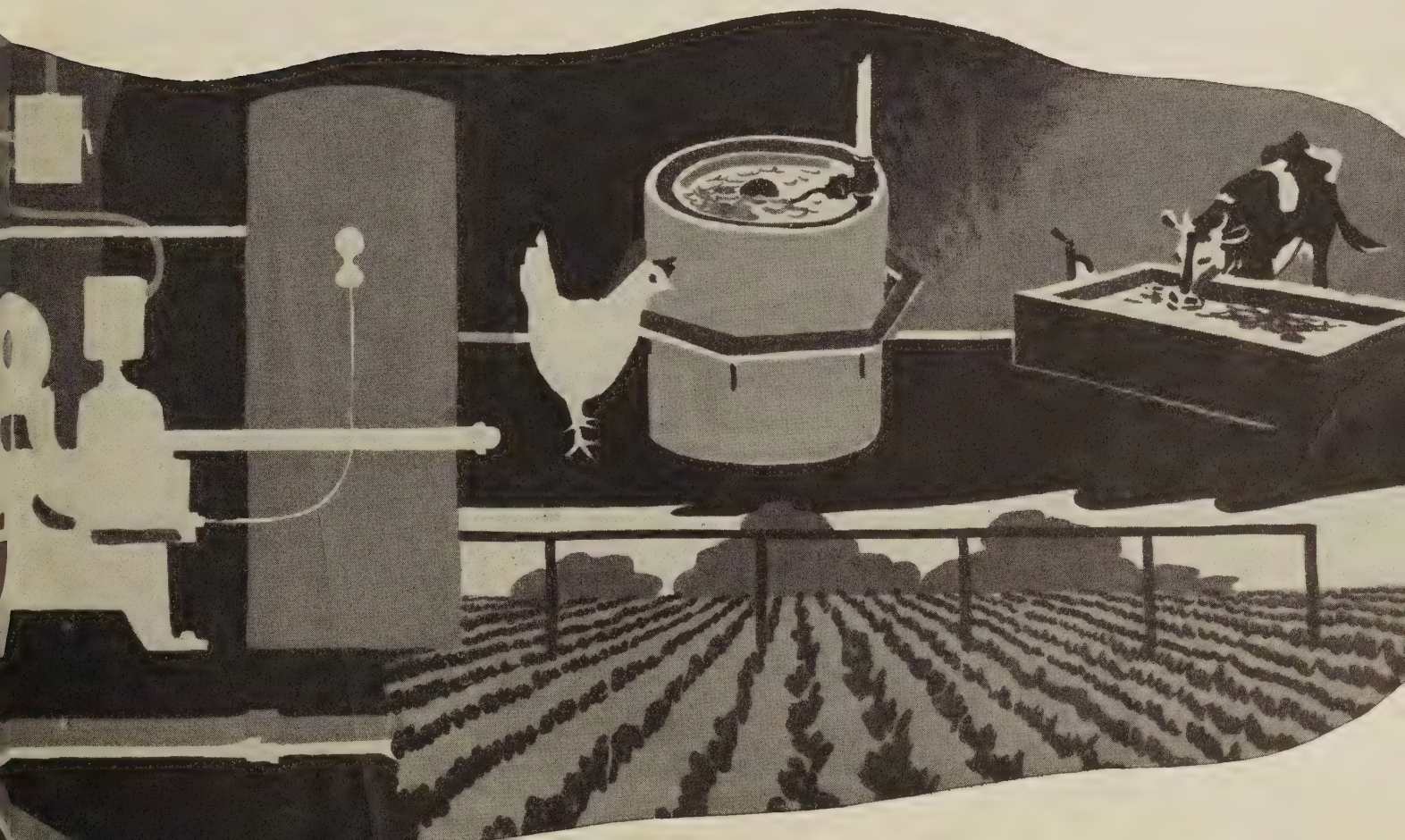
Each unit is designed to fit the individual requirements of the farm for which it is ordered. A shallow-well pump and running water to the house can be had for less than \$50. You may obtain similar savings on all plumbing equipment and fixtures, including bathtub, water closet, water heater, irrigation system, and drinking fountains for livestock. Altogether you may save up to half of the usual price for fixtures. Your co-op superintendent and the REA electrical adviser will help you plan a modern plumbing installation for your farm and give you detailed information concerning the “packaged plumbing” units.



and "Self Help"

If cost of fixtures has been the first price barrier to plumbing on the farm, installation cost has been second. And the hidden costs—the extras that kept cropping up—were even worse. Packaged plumbing and self-help bring all costs into the open—and cut them drastically.

Farmers are accustomed to turn their hand to many an odd job around the farm. Properly advised, they can do much of the work of installing a water system themselves. In order to help them do so, REA has arranged a series of plumbing demonstrations to be held by the co-ops. Here in the course of an installation, explained step by step, you can learn the elements of pipe fitting, how to lay out a sewage disposal system and drainage bed, and how to build a septic tank and the necessary concrete drainage tile. The co-op furnishes all the tools; you furnish the muscle. Trained plumbers will supervise the work and help out on the complicated connections. Through self-help you can save from half to three-fourths of the normal installation cost, depending upon the amount of work you do. Of course, you can also have the installation done by a plumber of your own choosing.



Enjoy Running

Water NOW

PAY COST OUT OF PROFITS

Fully aware that running water was indispensable to the modern farmstead, the Congress provided for financing plumbing installations for farmer-members on REA lines. Loans are made to the co-op or other borrowing agency, which in turn will finance installations for its members. Loans are not made directly by REA to individuals. The co-op may lend the individual farmer up to 95 percent of the cost of the job, with repayment in monthly or semiannual installments spread over periods up to 5 years. Repayments may be scheduled to coincide with peak periods of farm income. The loans bear an interest charge as low as 4 percent on the unpaid balance.

reserve

this Summer

COOL OFF WITH ELECTRICITY



SUMMER HEAT

Can spoil your milk and cream

Spoil your fresh eggs

Spoil your meats and poultry

Spoil your family's food supply

Make work and living doubly hard

for every member of the family

Keep COOL

with ELECTRICITY

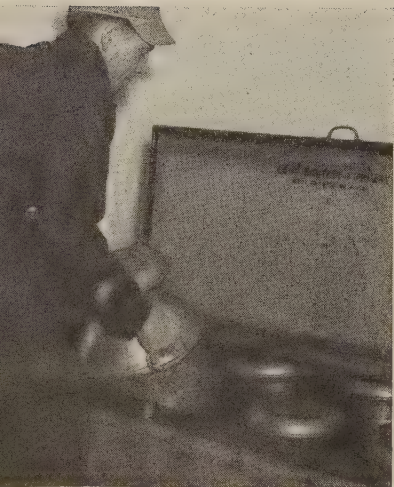
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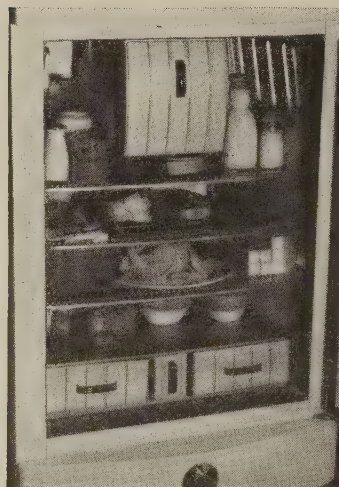
U. S. Department of Agriculture

Cool off

FOR COMFORT, HEALTH,



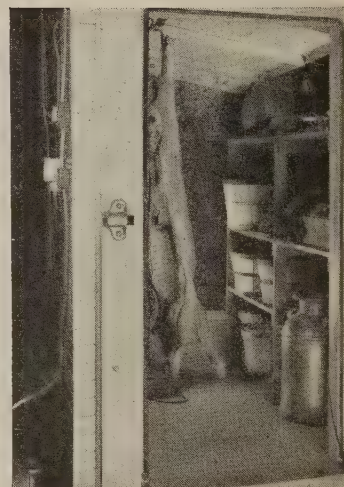
Milk must be cooled quickly to 50° F. or lower after milking, or the bacteria count will increase rapidly. A high count means a low price, or rejection. The electric milk cooler works at lower cost than other cooling methods, with less work for the dairyman and automatic control.



Foods spoil quickly on hot summer days. The electric refrigerator guards the family food supply: Butter, eggs, vegetables, fruits, meat, and all kinds of left-overs. It pays its way in more economical use of food, and in the possibility of greater variety in the hot-weather diet.

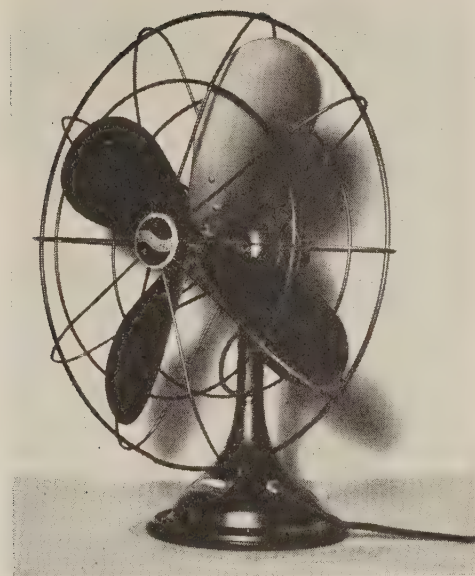


Do you sell sweet cream? To stay sweet, it must be kept at 40° F. or lower. High-grade sour cream for home churning or marketing must also be kept cool. Your household refrigerator can be used for cooling cream, by rearranging shelves or by using compact containers.

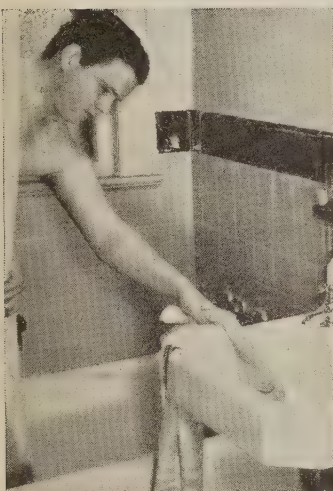


For storing eggs, pork, beef, fruits, vegetables, poultry, and other perishables, many farmers find large refrigerators or home-built "walk-ins" most practical. Many are built with a special compartment for freezing. For community needs, cold storage locker plants are most popular.

AND PROFIT



Only the clothes get hot on an electrified washday. A washing machine does the heavy work, once done on a scrubboard by hand. An electric iron replaces the row of sadirons heating on a hot range. Electricity can heat the water, too, without raising the temperature of the room. An electric fan to circulate air in the room makes any household task far more comfortable.



For personal comfort in summer, nothing can take the place of running water in kitchen, bath, and barn. It does away with pumping and hauling. At the turn of a faucet there is always water for cooking, washing, drinking—or for a cool shower at the end of a hard day's work.



Many poultry houses become so hot during the middle of summer days that egg production falls off. It's a simple matter to plug in an ordinary electric fan, mounted on a standard, to blow out the hot pockets near the roof and circulate fresh air. The extra eggs more than pay current costs.



Eggs stay fresh longer when they are cooled when gathered. Cabinets with blowers, like the one shown, are suitable for larger farms. A simpler arrangement, in hot weather, is to use an ordinary household electric fan to blow cool, damp air over eggs in an open wire basket.



The electric range and roaster heat food without overheating the kitchen. The farm wife can roast or bake on the hottest days without discomfort. A ventilating fan over the stove exhausts cooking odors, and cools the room. There are fewer flies in a kitchen kept free of odors.



YOU CAN AFFORD TO KEEP COOL



The first question any farmer will ask when he sees the equipment pictured in the preceding pages is, "How much does it cost?"

That is perhaps the most important question when you're thinking about an attic fan or kitchen exhaust fan. They have only one purpose, to keep you comfortable. There's no income in that, unless you figure that you work more efficiently when you keep cool.

But cost is not the best guide to buying other devices, such as the milk cooler, household refrigerator, or water pump. They are working appliances; they have to pay their own way. First cost is less important than the effect on your total yearly income.

Figure it out. The chances are you'll find that you not only can afford new equipment, but that you can't afford to be without it any longer.

Let's say that you keep a few cows and sell cream. Cream must be cooled quickly and held at low temperatures if it is to bring top prices, either as sweet or high-grade sour.

From your past records you can see what a cooling system would mean to you, either in a higher price for the cream, or in lower cost of cooling—for electricity is much less costly than ice. Is the margin big enough to help pay for an electric refrigerator?

Remember that this refrigerator will take care of all your household needs, too. It will cut expenses by preserving foods, at the same time letting you enjoy a greater variety of summer foods.

If you raise poultry for the market, and sell a few fresh-killed chickens each week, you may find that there's room in the refrigerator to cool them too. Or you may want that extra space for eggs.

It's important, as you can see, to have a refrigerator that's big enough. If you want to do any warm weather slaughtering, or want space to cool a good many chickens or eggs, if you want to keep vegetables or fruits in cold storage (or frozen) on your own farm, or if you have other needs for large space, you may find it better to buy a large commercial

refrigerator. You can even build your own "walk-in" at moderate cost. If you do, be sure there is a freezing compartment in the plans you use.

When you are working out the cost figures, don't forget that your own labor is worth a good deal. If you can save time, that may be a real saving in money.

Handling ice takes time.

Remember, when you think about an electric milk cooler, that it operates automatically at the touch of a switch and always keeps the milk at the right temperature, without attention.

Much of this equipment is useful the year around. There is no closed season on refrigerators or milk coolers. The kitchen exhaust fan is always useful, and running water is as much a blessing on cold winter days as in the middle of August. Even the simple electric fan has a winter use—blowing over a stove or radiator, it increases heating efficiency by as much as 50 percent, and eliminates those cold corners.

Why not spend this evening looking back over your records for the past year or two? Study them closely, and see if you can trace hot-weather losses, or all-year losses, due to lack of good refrigeration. See if you can think of other crops that could be marketed profitably if you had enough refrigerating space. Work out on paper the time you spend hauling ice and pumping water. How much do you spend on ice during a year?

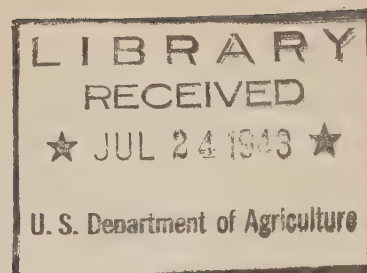
Like thousands of other practical farmers, you'll probably find that it pays to keep cool.

For more information, consult your System manager or County Agent,
or write to REA, Utilization Division, Washington, D. C.

RURAL ELECTRIFICATION ADMINISTRATION - WASHINGTON, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE

R88L
Reserve



*your answer
to the meat shortage*

A HOME-MADE ELECTRIC BROODER

Questions and Answers on Your Brooder

Q. What are the advantages of a lamp-type brooder?

A. Lamp brooding is a near approach to natural brooding conditions. Lamps do not heat the entire brooder house. Therefore their use permits a natural zone of cool air away from the brooder. By moving from the heated air under the brooder to this cool zone at will, chicks become adapted at an early age to changing temperatures, and thus become more hardy.

Q. What about heating elements and thermostats, as recommended in earlier brooder plans?

A. Some thermostats do not operate satisfactorily with incandescent lamps. To prevent trouble and save critical material, thermostats and strip heaters are not used.

Q. Some brooders use four lamps. Why only two?

A. Fewer lamps reduce the use of critical material, such as wire and fittings, by about 80 per cent.

Q. Why can't I use one double-size lamp?

A. One lamp may burn out. Two are not likely to fail at the same time.

Q. At what temperature should I keep the brooder?

A. Your county agent can advise you on temperatures needed for the various ages of chicks. Lamps should be replaced by smaller ones if temperature is too high.

Brooding Insures:

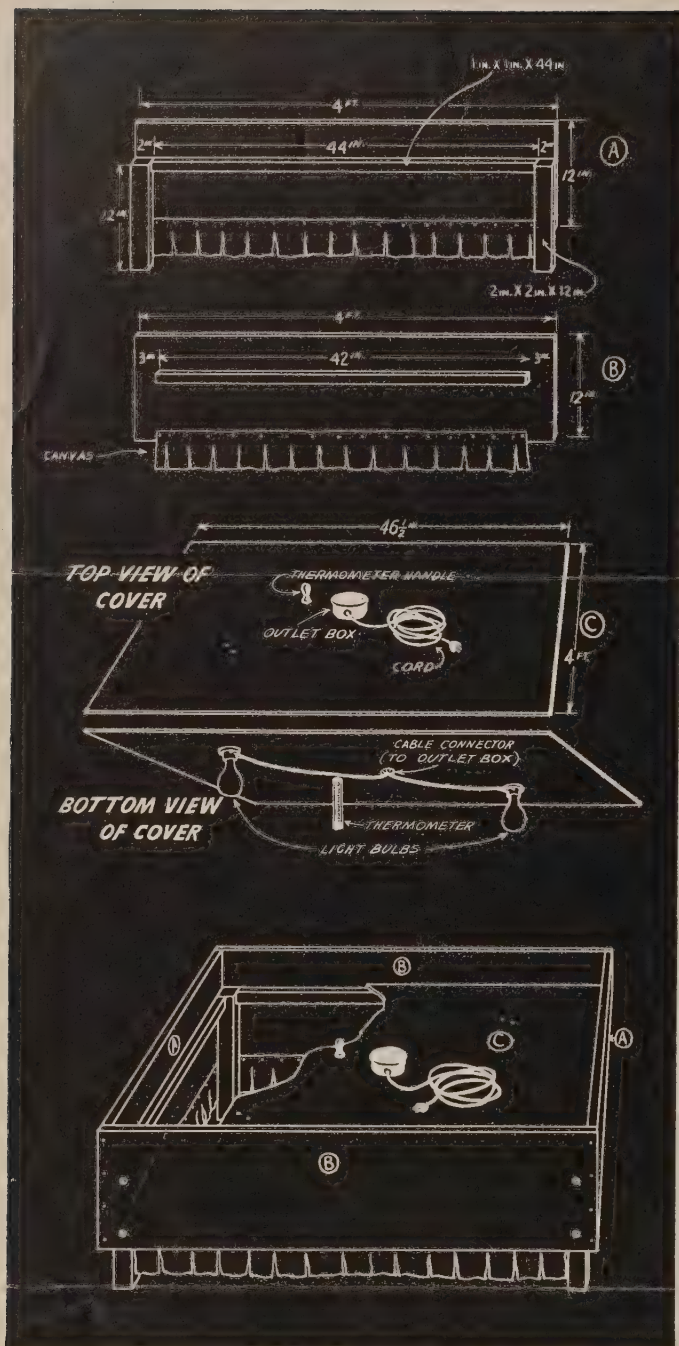
A steady supply of meat for war-time needs—including those of your own family.

Increased production — and more cash income.

Spring replacement of laying hens lost in fall and winter.

Added service with a minimum investment.

**RURAL ELECTRIFICATION ADMINISTRATION
U. S. DEPARTMENT OF AGRICULTURE
St. Louis, Missouri**



Assembling the Brooder

First, cut cover piece as indicated. Cut other lumber to size. Then assemble pieces as indicated in diagram. Use shingle nails, and secure with screws for additional strength. Nail support for cover along sides as indicated. Next, locate the center of the cover by drawing diagonal lines from opposite corners. Bore a $\frac{3}{4}$ -inch hole at the center, and two $\frac{1}{4}$ -inch holes at either side, to accommodate the outlet box. Attach the box by stove bolts. Fit one cable connector in knockout opening in bottom of outlet box. Fit the second cable connector in the sides or top of outlet box as desired.

Bore two $\frac{1}{4}$ -inch holes to fit light receptacle openings, half way between the outlet box and the respective corners. Bolt receptacles to cover. Bore another $\frac{3}{4}$ -inch hole at one side of outlet box to hold the thermometer.

OBTAIN THESE MATERIALS:

Lumber	Cut to:	Use
Two pieces, 1" x 12" x 8 feet	Four pieces, 1" x 12" x 4'	Sides
One piece, 2" x 2" x 4 feet	Four pieces, 2" x 2" x 12"	Legs
One piece, 1" x 4" x 4 feet	Two pieces, 1" x 1" x 44"	Support for cover
	Two pieces, 1" x 1" x 42"	
One piece, $\frac{1}{4}$ " x 4' x 4' of plywood, wallboard, or any light, rigid and damp-proof material as available.	$\frac{1}{4}$ " x 4' x 46 $\frac{1}{2}$ " (One and one-half inches off one side)	Cover

Electrical Supplies

One 12-foot extension cord and male plug	
Two porcelain lamp receptacles (covered terminal type)	Hold lamps
Six electric lamps (two each of 200, 150 and 100 watts—or as needed)	Heaters
Two one-half inch cable connectors	Hold cord fast in outlet box openings
One four-inch metal outlet box and top	Protects splice in cord
Six-inch strip of friction tape*	Tape wires in outlet box
Six-inch strip of rubber tape	Tape wires in outlet box

Miscellaneous

24" x 36" strip of heavy cloth or	Side canopies
Six pieces, 4" x 36" canvas	
One brooder thermometer	
$\frac{1}{4}$ lb. shingle nails	Fasten canopies to sides
1 box wood screws 1 $\frac{1}{2}$ " No. 6	
1 box carpet tacks	
Six $\frac{1}{4}$ -inch by one-inch stove bolts and nuts (screws may be substituted)	Fasten electric fixtures to cover

* Wire should be soldered or clamped before taping.

Attach cloth or canvas canopies, with bottom edge cut to permit small chicks to pass in and out readily.

A spool or two attached to the cover will serve as handles for raising.

When the brooder is in use, chopped hay or straw, ground-up corn cobs, cottonseed hulls or other insulating material should be piled on the cover, level with the top of the sides.

How Much Power?

Amounts of power used to brood 250 chicks for a six-week period with this two-lamp brooder will vary according to weather conditions in various areas. The thermometer will be used to determine when bulbs of lower wattage may be substituted. A *maximum* power demand may be calculated as follows:

Two weeks (14 days) with two 200-watt lamps =

$$\frac{14 \times 24 \times 400}{1,000} = 134.4 \text{ kwh}$$

Two weeks with two 150-watt lamps =

$$\frac{14 \times 24 \times 300}{1,000} = 100.8 \text{ kwh}$$

Two weeks with two 100-watt lamps =

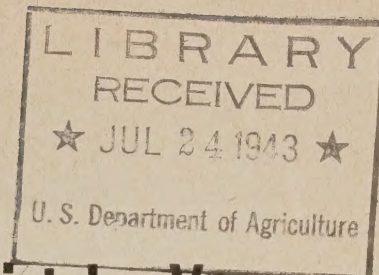
$$\frac{14 \times 24 \times 200}{1,000} = 67.2 \text{ kwh}$$

Total..... = 302.4 kwh

$\frac{302.4 \text{ kilowatt hours}}{250 \text{ chicks}} = 1.29 \text{ kilowatt hours per chick over the six-week period.}$

R88L
Reserve

24% MORE HOGS IN 1943



Hit This Goal with Your Homemade ELECTRIC PIG BROODER

Secretary of Agriculture Wickard is asking American farmers to produce 13,800,000,000 pounds of hogs in 1943—a new world high, 24 per cent more than our 1942 goal.

We can do it—we can do it by using all of the equipment at our command. Electric pig brooders may save as much as one extra pig in each litter. And each extra pig raised to maturity may yield as great a force in the world struggle as an extra bomb or an extra gun.

Then, those farmers who have electric service must use that service as a weapon in fighting through to reach our 1943 production goals. I predict that electric pig brooders—many of them built by the farmers themselves—will be an important aid in that battle.

"An Extra Pig in Each Litter"

Herman Schmidt, member of the O'Brien County, Ia., Rural Electric Cooperative:

"I brooded 130 pigs during the middle of March. I had the lamps on continuously for about the first two weeks. After being placed under the lamps the pigs stayed there continually and only came out to suck. Even now when they are three weeks old and the lamps are not on they spend much of their time under the hover. Usually, I expect to lose at least one pig each litter because the sow lies on them. This year not one was actually lain on by the sow."

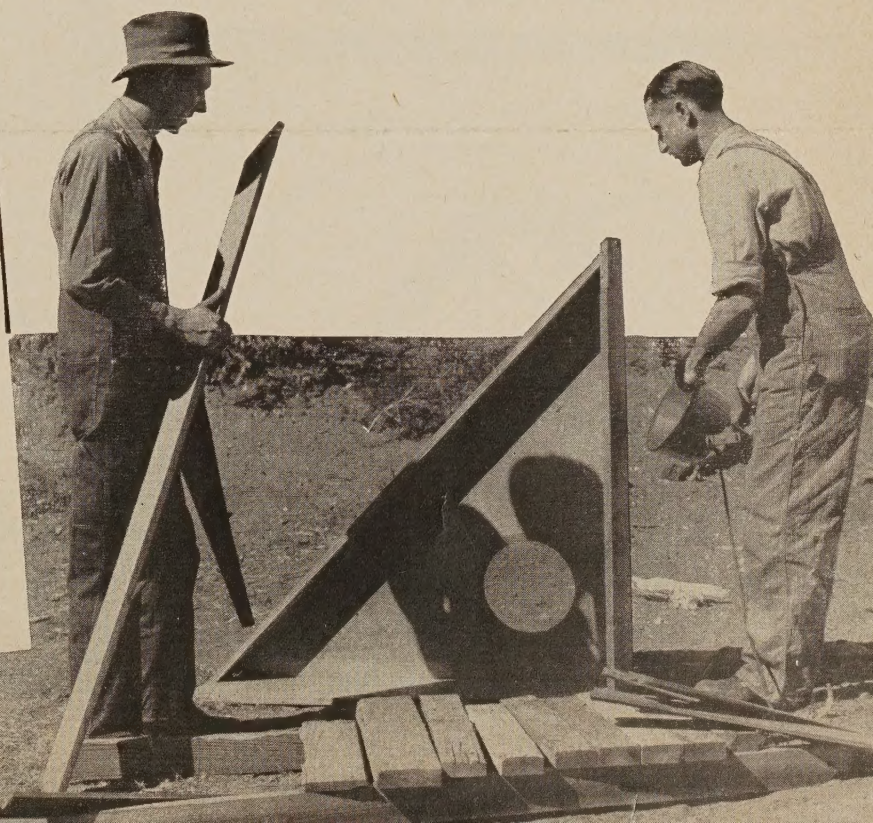
Steve Dearing, member of the Missouri Rural Electric Cooperative Association:

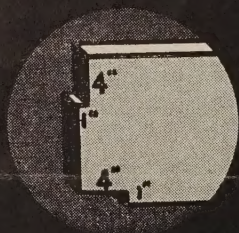
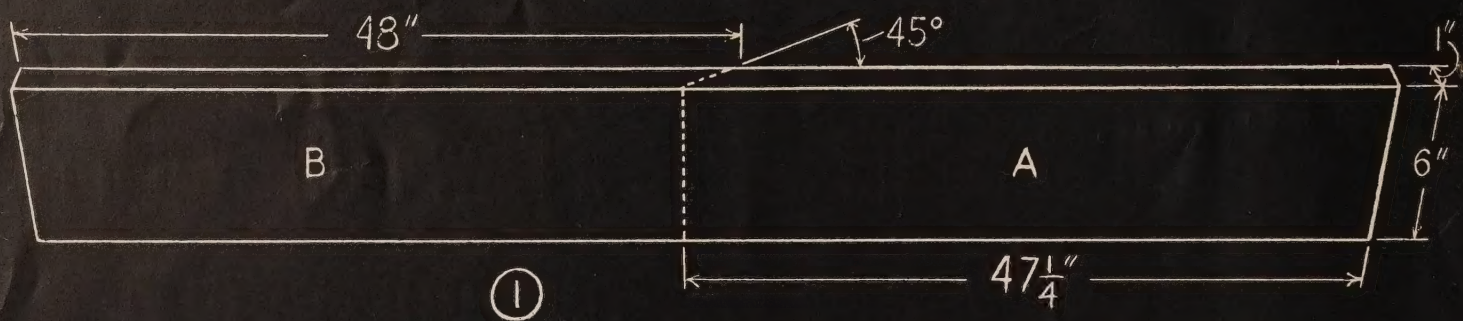
"Before using homemade brooders my loss would run as high as 25 per cent of each litter, as the result of exposure, crushing and injury. Last spring I had 32 homemade brooders in operation. Of the 375 young pigs I raised in these brooders, very few were lost or crippled."

What Members Schmidt and Dearing have done, you can do. When you use electric pig brooders you help your nation and increase your own cash income.

Harry Seating

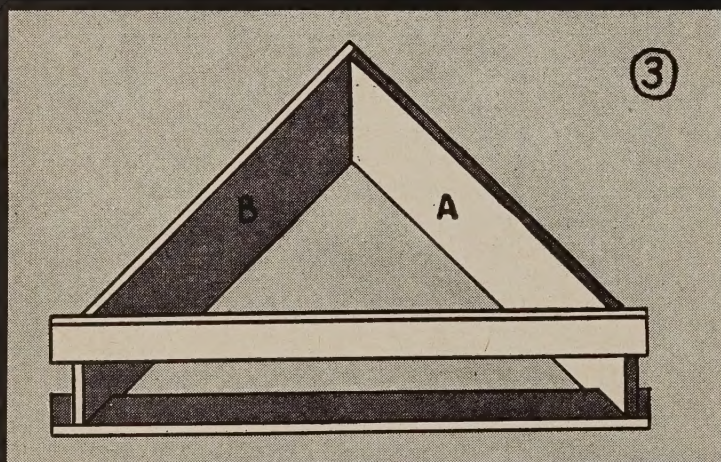
Rural Electrification Administrator.



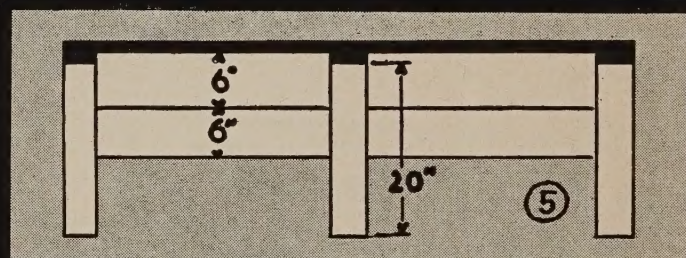


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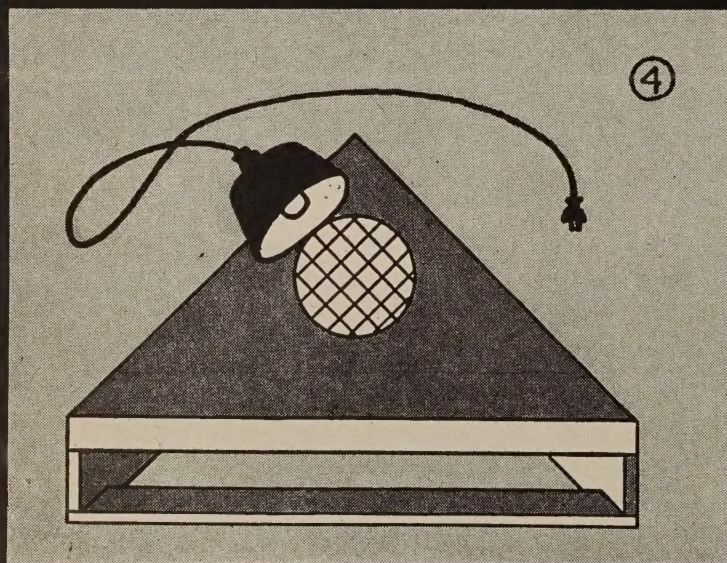
Make It Yourself In Your Spare Time



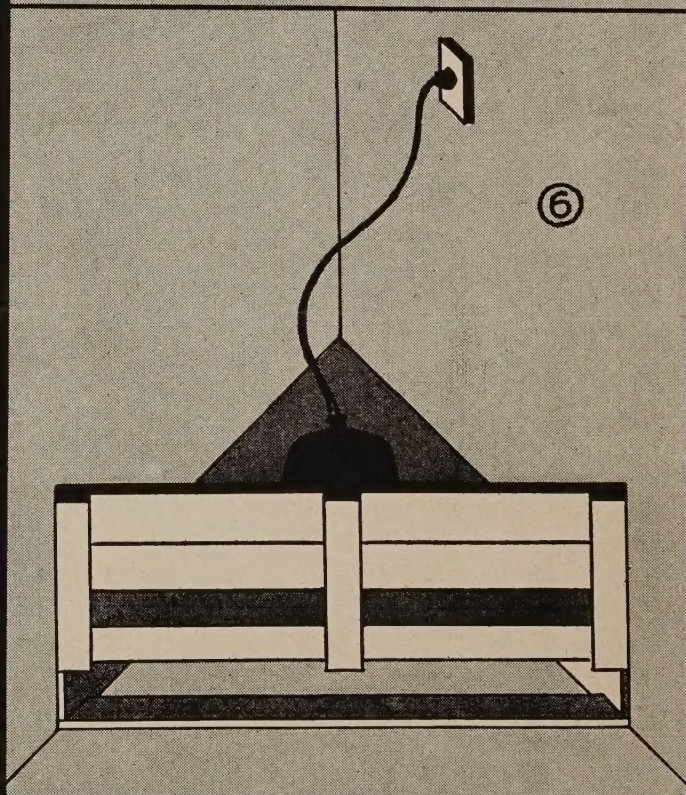
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Materials for Your Brooder

Lumber

One piece 1" x 12" x 8 feet
 One piece 1" x 4" x 12 feet
 One piece 1" x 6" x 12 feet
 One piece 1" x 4" x 6 feet
 One triangular piece 1/2" plyboard, wall-board or other rigid material as available

Cut To

{ One piece 1" x 12" x 4 feet }
 { One piece 1" x 12" x 47 1/4 in. }
 Two pieces 1" x 4" x 67 3/4"
 Two pieces 1" x 6" x 6 feet
 Three pieces 1" x 4" x 20"
 48" x 48" x 67 3/4"

Use

Sides
 Braces
 Guard rail
 Guard rail braces
 Roof

Other materials

One strip hardware cloth, 1/2" mesh, 18" x 18" or sufficient pieces of wire to weave mesh
 1/2 pound 8d common pails
 1/2 pound 6d common nails
 Wire staples
 14" RLM enameled reflector, cake pan, lard pail or other available metal painted white for reflecting

100-watt or 150-watt lamp as required
 Weatherproof socket
 10 feet rubber covered extension cord

Tools: Light clawhammer, hand saw, tin cutters, steel square, keyhole saw.

Cut Your Lumber

Cut the 1" x 12" x 8 feet board diagonally at 45-degree angle, in such a way as to make two boards A and B (see Drawing 1). The longer edge of A must be 47 1/4" and the longer edge of B must be 48". The opposite end of each board must be square. Notch beveled end of each piece as shown in Drawing 2.

Cut the 1" x 4" x 12 feet board in half for two braces. Fit the braces into the notches cut in the sides of A and B. Corners are then cut off flush with the sides to give a finished job.

Cut guard rail into two pieces, each 1" x 6" x 6 feet.

Cut three uprights to brace guard rail from 1" x 4" x 6 feet piece of lumber.

From the corner opposite the long side of the triangular plyboard, or other rigid board, draw a line to the middle of the long side. The midpoint of this line is 17" from the long edge, and 17" from the corner opposite the long edge. Using the midpoint as center, mark out a circle 14" in diameter or with 7" radius. Cut out this 14" circle, using a keyhole saw or other cutting device.

Then Assemble Your Brooder

Set up sides A and B. The square end of the 1" x 12" x 47 1/4" board A must be butted at right angles against the side of the board B, at its square end. The beveled ends must be flush. Nail the sides together with 8d common nails. (See Drawing 3.)

Fit and nail braces into the notches cut in beveled end of pieces A and B. Saw off protruding corners flush with the sides.

Fit the roof into place as indicated. Nail to sides and top front brace with 6d common nails.

Staple the hardware cloth or criss-crossed wire to the under side of the roof, covering the 14" hole.

Insert lamp assembly and reflector in roof hole so that lamp cannot move. (See Drawing 4.)

Assemble guard rail, as shown in Drawing 5, from the three 1" x 4" x 20" pieces and the 1" x 6" x 6 feet pieces.

Nail guard rail securely to top of brooder. (See Drawing 6.)

The Answers On Electric Pig Brooding

The Homemade Electric Brooder costs little to build —

You need only some lumber, an electric lamp, something to reflect its heat, and a few odds and ends.

— is cheap to operate

Heat requirements vary according to seasonal temperature, but in general the 150-watt bulb is sufficient. Normal energy consumption per litter with this bulb is about 36 kilowatt hours, and should never exceed 50.

— protects little pigs

Electric heat prevents chilling when the weather is cold; sharply reduces the chances of crushing by the sow. Records show that three-fourths of all pig losses, including both death and crippling, occur within two days after farrowing.

Electric brooding cuts these losses at least in half. It saves you as much as one pig in each litter.

— no fire hazard

Electric heat is steady and reliable. There is no danger of overheating.

It will pay you to build and install an electric pig brooder in any wired outbuilding that is weatherproof and otherwise suitable for brooding. Few pieces of home-made farm equipment will show such savings at such slight construction and operating expense as a pig brooder.

When Operating Your Pig Brooder—

You will find it helpful to place the sow in the pen a day or so before farrowing, and to turn the lamp on in the brooder several hours before the pigs arrive.

It is advisable to block the brooder entrance for several hours after the pigs arrive, to make sure that they keep warm and dry.

Heat ordinarily should be kept on continuously for 10 days, not including the time before the arrival of the pigs. If the weather is cold, this may be extended to two weeks, or as long as is thought necessary.

Pigs can be placed in the brooder by hand until they learn to go voluntarily. In some cases it will be sufficient to place the pigs under the brooder only once or twice; in other cases a day or two of training will be necessary. You will be surprised at the way the little pigs run for the electric light instead of the sow, and you will be pleased at the number of pigs you save from cold and crushing.

Securing Brooder

If it becomes necessary to move the brooder from one farrowing pen to another, be sure that it is bolted securely in place each time.

Your Country Needs Your Extra Production—Now!

REA